

# **RoKS Competitive Grants Program: Review and Recommendations**

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## **Introduction**

When proposed to the IDRC Board of Governors in 2001, the overall objective of RoKS was to explore, from a developing country standpoint, the ways in which knowledge is produced, communicated, and applied to development problems, and the policy and institutional frameworks which govern this process. During its initial phase, RoKS sought to:

- promote analysis and debate at the local, national, and international level on key issues in the evolution and functioning of “knowledge systems” in developing countries;
- establish IDRC’s reputation as an innovator in this area, and in particular as a channel for independent southern perspectives and voices; and
- identify longer-term activities and partners with which to pursue these initiatives.

To achieve its objectives, RoKS was designed from the outset to:

- establish annual research competitions on specific themes;
- support ongoing networks aimed at knowledge-sharing and capacity-building;
- match grant support to short-term, client-focussed research projects; and
- support ongoing research and consensus-building projects designed to build on the themes of the annual research competitions.

The annual research competition, designed as the centre-piece of RoKS activities, was expected to yield these benefits — identify promising researchers, increase visibility for IDRC and its partners, and identify priorities for longer-term research and action. The competition was to serve both as a test-case for longer-term involvement in the field, and as a seedbed for other ongoing activities. Each year the competition was to focus on a specific issue or theme and absorb the bulk of RoKS funding during the first two years.

The competitive grants model was seen to have several advantages for RoKS: it was a highly visible type of activity which would serve to demonstrate IDRC’s commitment to work in this field; it promised a transparent decision-making process; it was easy to scale up, allowing RoKS to expand the scope of the competition as additional IDRC or non-IDRC funds became available; and offered ease of entry and exit, allowing RoKS to explore a range of issues without having to shoulder the kinds of longer-term commitments associated with other funding models. Perhaps most importantly, however, the competitive grants model would help to identify promising researchers for follow-up

activities, a key consideration in a field where the “best” researchers — particularly younger researchers — were not necessarily known to RoKS.

It was recognized that the competitive grants model does not allow particular issues to be probed in depth over a long duration, and would therefore play a limited role in building longer-term research capacity. For this reason, the annual competition would be used as a spring-board to launch longer-term knowledge networks and projects to be funded by RoKS, other IDRC initiatives, or other donors.

Over time, the annual research competition was to be complemented by other ongoing projects geared to networking, direct client-focussed research, and longer-term research and consensus building on particular themes and policy issues.

### ***Purpose and Conduct of Study***

The overall objective of the review was to address specific program and administrative issues directly related to the ROKS Research Awards and make recommendations for management of future competitions. In preparation for the review, specific questions that might be addressed by the study were developed in conjunction with Ms Jean Woo, Research Officer, RoKS and Biotechnology, who was the coordinator of the study for IDRC.

With regard to program issues, these questions were developed: How effective are the competitions in identifying new researchers? Is there a bias to more experienced researchers or to specific regions? How are (or should) themes be chosen? How effective are these programs in targeted delivery of funds? Are such programs effective in focussing research in emerging or ignored areas? If so, how lasting is this impact? Do such programs enhance or establish the research credibility of the organization that organizes them? Do researchers find these programs to be restrictive or meddling in terms of their research interests? Are proposal development workshops worthwhile? If so, in what circumstances? What role can/should be played by Program Committees?

With regard to administrative issues these questions were developed: What is the most effective way/venue to issue the call for proposals? Is a two-stage system (concept note then full proposal) best, or are other models more effective? Do application forms help proponents and/or reviewers? Are the processes for selection clear and transparent? What is the most effective way to review multiple ideas and proposals? How can administrative issues and responsibilities (such as issuing contracts and payments) be minimized without jeopardizing accountability? Should awards be issued for fixed amounts or be opened up to some predetermined maximum? What level of staff support (technical and administrative) is needed to run a grant program? How do recipients view IDRC administrative procedures/processes?

Recommendations were sought in these three areas: potential changes in program development and delivery; potential changes in administrative

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procedures; and the pros and cons of contracting the administration to a third party. These questions guided the development of the data collection instruments.

Interview guides and email questionnaires were developed and pretested to guide data collection. Interviews were conducted with six IDRC program staff and four grant administration staff (see Appendix 1). Email questionnaires were sent to 18 awardees from the first three RoKS research award competitions and responses were received from half.

The awardees who replied to the email questionnaire represented all three competitions. Of the 9 responses, 4 were from 2001–2002, 3 from 2002–2003, and 2 from 2003–2004. All respondents were asked questions about both the administrative and program aspects of the RoKS awards program (see Appendix 2). The responses from awardees in all three competitions were grouped for analysis, but any year-specific differences in opinion were noted.

IDRC staff who were interviewed had been directly involved in the administration or program aspects of RoKS. Their joint expertise and experience covered concept development, project development and approval, direct involvement in proposal review, project monitoring and evaluation, and overall program management. In addition, staff had expertise in all aspects of IDRC's financial and administrative procedures related to proposal review and approval as well as on-going project monitoring. Those who were interviewed rated themselves as being either "familiar" or "very familiar" with the awards program. Each interview lasted about one hour.

Several studies were examined to determine what had been learned from earlier reviews of IDRC experiences with this kind of funding mechanism. In addition, several reports and documents prepared by RoKS staff were consulted to better understand the history and evolution of the program itself and specifically the research competitions.

### ***Organization of Report***

This report presents the study recommendations immediately, then provides a historical perspective on IDRC's previous involvement with grant programs, details the three RoKS awards programs that have been held to date and are the subject of this review, and presents the data and analysis from the present study. The appendices list those who provided input, provide details on the instruments used for data collection, and furnish abstracts of the projects funded by each competition.

## Summary of Recommendations

This summary is organized into four broad categories. The first looks at broad program issues, the second addresses project development and management, the third discusses project administration, and the fourth reviews the pros and cons of devolving the competition.

Before starting this discussion, it is important to state that respondents from both inside and outside IDRC commended RoKS for taking this initiative and gave the competition **high marks for its achievements**, especially in light of the human resource limits that had been placed on the program. The awardees were particularly high in their praise for the fact that RoKS made available funds not so much for new areas of research, but for areas of research which were unique and for which research funding was difficult to get or nonexistent.

That one person had managed this competition and other aspects of the RoKS program was considered exceptional. There should be no doubt that an awards competition is **extremely labour intensive** because many activities (e.g., proposal receipt and review, correspondence, MGC preparation, and payments) must all be coordinated and undertaken according to a very tight schedule. This approach to programming is definitely not anything like “not too labour intensive” as was originally envisioned. If the awards are to continue as currently managed, the provision of more human resources is critical.

### ***Broad Program Issues***

As RoKS looks to the future of the awards competition, there are several broad issues that should to be addressed. Comments from awardees as well as IDRC staff suggest that it may be time to consider some **changes to the scope of the call for proposals** (CFP). There is a feeling that it may be time to consider separate regional competitions. As well, it was suggested that the themes should be more tightly focussed (that is there should be more precision in defining the research topics that will be supported). There are a few advantages associated with these suggestions. First, the competitions could have a sharper focus on regional priorities. Second, it could make the screening and selection of proposals easier if there was more coherence among the submissions. Third, the awardees would have more in common and could be expected to be more likely to take advantages of the networking opportunities that are presented. Fourth, it might be a way to build on past RoKS awardees in the regions both to help identify themes and perhaps serve as referees or resource persons for future projects. Fifth, it could help involve the Regional Offices in theme identification and foster their interest in the projects and the dissemination and promotion of project results.

It might also be worth considering an **expansion of the awards program** to more broadly address the issue of capacity building. As it now stands, more experienced researchers are most likely to receive the awards through their institutions. Junior researchers can be involved (and separate funds have been allocated for this purpose), but it might be more effective to have training awards more directly targeted at less experienced researchers or at researchers who have an interest in the theme but who lack direct research experience in this area. Having both the current research awards and separate training awards may be an option.

At the same time, it may be useful to **assess the long-term advantages of organizing a research awards competition**, with its attendant administrative costs, rather than accepting research proposals around specific themes throughout the year. Alternatively, the approach could be one that identifies researchers and invites them to join a research network on a specific theme. The competition was clearly useful during the initial stages of the program, but as the program matures and becomes better known and established, the programmatic advantages of holding a competition to allocate research funds must be clear. This modality will grow in complexity and human resource requirements for administration as the number of recipient institutions involved continues to climb (especially if they are new to IDRC). This issue is discussed further under project administration. A second related issue is the time needed to fully address complex subjects. At least some of the awardees do not think that the current timeframe is sufficient to obtain in-depth understanding of subjects before RoKS moves on to other areas of enquiry. This was recognized when the competition was organized and supports the notion of followup projects to continue earlier initiatives.

The direct involvement of the Rockefeller Foundation in competition three illustrates the wider interest that exists in this awards program and points to the **possibility of resource expansion** both for the competition itself and the possible funding of follow-up projects either to further the research objectives or seek to implement findings. One awardee suggested that there should be closer links to CIDA for follow-up activities. Making contacts and links with other donors should be pursued now that the staff complement in the new IPS program is growing.

It may be worth revisiting the **process used for proposal review and assessment**. The current system, although very thorough, seems to be rather excessive. Currently, up to 10 people review each proposal before a final decision is made on its suitability for funding. This seems to be an excessively complex system of peer review. It should be possible to institute a system that is based on review by up to three subject matter experts and perhaps two IDRC staff (one program and one GAD). The IDRC review could come before the subject matter review (whether internal or external to the Centre) to ensure



broad adherence to the theme and determine the nature of the administrative information that will be required. This recommendation could be coupled with instituting a specific review committee for each competition, rather than depending on the advisory committee to participate in proposal review. Their input could be reserved for higher level program input and advice.

Finally, both awardees and IDRC staff are aware of the need to **publicize and disseminate the results** that have been generated by the awards competition. As the program has evolved, more specific emphasis has been placed on this aspect of the evaluation of project proposals and the discussions held at the review workshops. The awardees have suggested the need for formal publication of their results. This is certainly an important first step for which RoKS could provide assistance if necessary. However, seeking to influence policy is a complex process that would have to involve many other domestic and regional organizations, as well as the press and other media, and their involvement in setting agendas and identifying research topics to ensure that research is addressing questions for which answers are sought. Specific projects could be developed to work with one or several of the awardees to explore how their results and conclusions could be “marketed” in different contexts and to different audiences. Given the level of interest expressed by awardees, such a network might well attract the interests of previous awardees and encourage the type of information sharing that has been difficult to establish to date.

### ***Project Development and Management***

The RoKS team has been active in soliciting input from awardees and modifying various aspects of the development and management process in response to their suggestions. For example, the application form was modified following the first competition based on user feedback. However, the **application form received the most negative feedback** from awardees. One went so far as to suggest that the form alone might be enough to discourage her from applying for a grant.

There are two main purposes for the form. One is to indicate from a program perspective the research that is being proposed and the resources that will be required to achieve the research objectives. The second is to provide financial information needed to verify the budget and administrative information on the institution(s) with which the researchers are affiliated. The idea of submitting a concept note was considered a positive step by the awardees, but still the form came in for criticism as being too difficult to navigate and complete. The question becomes: What is the minimum information needed to make a decision as to whether a project idea falls within RoKS criteria and is worth pursuing further? It would be worth looking at the current “short” form and seeking ways to further simplify the presentation and information requirements. A second question might be: Is this idea of a form useful or

better than the standard information or guidelines provided to other applicants for IDRC funding? At least one GAD staff member questioned whether the form was simplifying or speeding the process of MGC preparation as essentially the same MGC is being used for RoKS awards projects.

The **peer review workshops** were considered to be a very positive aspect of the awards program. Some staff did question the cost effectiveness of this approach, but awardee response was very positive. Given that the proposals are reviewed in detail during these sessions, it is important that GAD staff have an opportunity to review all budgets and associated notes in detail before these sessions. The level of financial and administrative review should equal the level of technical scrutiny. If future project review workshops are planned, it would be worth having the GAD representative attend the workshop to work through all administrative and financial details with the awardees. This would establish direct contact with GAD staff and clarify future administrative and financial responsibility.

Internal **clarity is required on roles, authority, and responsibility**. For a variety of legitimate reasons, the Research Officer has tended to take responsibility for many administrative tasks. This has resulted in a significant extra workload. GAD staff have expertise and experience in all aspects of project administration and have expressed their desire to be more fully engaged earlier in the decision-making and proposal review stages. Further discussion is needed to put workable processes and procedures in place to spell out the responsibilities of all staff and to ensure that appropriate authority and accountability systems are in place.

A great deal of effort has been expended on ensuring that proposals are judged through a fair and fully transparent **system of review**. As mentioned in the introductory comments, some consideration should be given to modifying the current system to streamline the process. Fewer people should be required to review each proposal. Based on the somewhat surprising input received from some of the awardees, they feel there is a need to provide more detailed evaluation feedback and precise input on the technical aspects of their proposed research. It may be that more in-depth review by fewer subject-matter specialists is required rather than review by a greater number of less-specialized reviewers. One possibility is to constitute **a separate highly specialized review committee** for each of the competitions. The advisory committee should be retained to provide overall advice and continuity of the RoKS program. But a team of perhaps three specialists would be better positioned to adjudicate proposals and offer specific technical input. They could provide this input throughout the life of the particular competition and perhaps act as special project advisors.

**Networking** opportunities have been provided, and RoKS staff have worked hard to stimulate interest in information sharing. However, the networks have failed to live up to their potential. The awardees recognize this shortcoming and place the blame directly on themselves. They recognize that the opportunities exist, but note that differences in geography and subject matter make it difficult to find areas of common interest. Without such a “hook” upon which to build dialogue, networking will continue to exist in name only. It cannot be forced; it must grow from a natural intersection of interests. This outcome can be traced back to the rather general global themes of the competitions. Regionalization of the competitions might help, as would more specificity in the research topics. However, it may be more prudent to link researchers to extant networks that might be open to new regional themes than to try to launch new networking ventures. Regionalization of the awards program might also enhance Regional Office engagement in theme and researcher selection, necessary administrative follow-up, and results promotion and dissemination.

**Capacity building** was an expected output of the awards program. The awardees have doubtlessly personally benefited from the research awards; however, most of the awardees have been more experienced researchers. Skills improvement, where it has occurred, has been more at the individual level. This has included the researchers and to a more limited extent administrative personnel. Institutional capacity building has been understandably little affected given the short duration of the projects themselves. Efforts were made to engage younger researchers by making targeted funds available within the program structure. Consideration could be given to separate training awards for such people, either through “linked” awards or through a separate training awards program.

The RoKS awards have been successful in attracting **new institutions** to IDRC’s sphere. About half of the institutions had not previously received Centre funding. This success has administrative “costs.” New institutions undergo an administrative risk review and the results of this review affect the nature of the project review and approval (see more complete discussion under project administration). From a program perspective there has been success in exploring new entry points for IDRC funding. Different researchers and institutions are now aware of IDRC and its desire to fund science and innovation policy research. These **new researchers** to IDRC have benefited from their interactions; however, contact may have been lost with other interested researchers who were unsuccessful in their project proposals. They have come to the surface but have now returned individually to their day-to-day activities. Perhaps this broader community of interest could be cultivated through some electronic form once staffing resources make such efforts reasonable to consider.

### ***Project Administration***

Administration of the RoKS awards program has not been without its difficulties. However, the problems that have been encountered are not unique to RoKS. According to GAD staff, the difficulties with such issues as country clearance, budget details, risk assessment, and banking information are common to all projects, especially those involving first-time recipient institutions. Two factors contributed to the challenges of project administration. Of lesser importance were changes in staffing within GAD, and the attendant loss of continuity. The more crucial issue is the timeline for project approval and the excessive workload created by having to review, approve, and administer between 6 and 9 separate projects at exactly the same time. Any delays and extra approvals are magnified when they are applied to several projects moving through the system concurrently. This is especially true when project review workshops must be organized and managed at the same time.

The fact that many of the projects involve **institutions that are new to IDRC** triggers some additional administrative requirements. A risk assessment is mandatory and must be done by the Regional Controller or an Ottawa-based Manager if the level of outstanding commitments is more than \$100,000. For all new institutions, corporate documents must be provided, an institutional profile questionnaire (IPQ) must be completed, and an audited financial report must be supplied. As the risk rating rises, the requirements for more complete and detailed budget notes may also rise. It is important that GAD make these requirements known to program staff and awardees as soon as possible to avoid undue delays and “surprises” later in the approval process. This implies that GAD staff must be involved as early as possible in the administrative review of proposals.

As more projects are encouraged to foster **inter-institutional collaboration**, many of the same requirements will apply to all collaborating organizations. There is also a need to ensure that the MGC adequately reflects the nature of the relationship among all collaborating organizations. The steps leading up to the preparation of the MGC appear to be the main bottleneck in the approval process. The use of the RoKS application form has not helped alleviate this situation, which was one of its original purposes when it was developed in collaboration with GAD.

The risk-related requirements have a direct bearing on the **time needed for project approval** and must be adequately built into the schedule of pre-approval activities. This can easily take as long as 6 months. Delays in one or two projects will have implications for the planning of such activities as networking workshops to report on project results as some projects may be well behind others in their progress. It will also mean that projects will come to an end over a range of dates. For this reason, it is important that the project

approval document (PAD) for the entire competition be considerably longer than the duration of the longest anticipated project to avoid the need for time extensions.

After the MGC is issued, signed, and returned, the remaining administrative requirements are reported to be straightforward. Payments and reports are similar to other projects and cause few problems. This fact is verified by both GAD staff and the awardees themselves. Consideration must be given to finding ways to **lessen the workload during MGC preparation** through a combination of ensuring there is appropriate delegation and sharing of responsibility and looking at the way in which project proposals are vetted by RoKS and GAD to see if this process can be made more efficient.

All of these administrative steps have been instituted to ensure that IDRC retains **accountability** for the funds it invests in the awardees. It is important that program staff take responsibility for ensuring that the technical progress of the project is adequate and according to the benchmarks that have been established. However, responsibility for monitoring the financial and administrative performance of the awardee rests with GAD staff. This sharing of responsibility should be acknowledged and could prevent duplication of effort or confusion on behalf of the awardees.

### ***Devolution***

Discussion of devolution **seems a little premature** if the awards are still considered an integral part of RoKS programming. It would be more prudent to consider this option only after the program decides to move onto other program funding modalities. If the awards no longer fill a programming niche then spinning them off to another organization to manage would make sense. A decision on programming objectives would need to precede serious discussion of devolution.

Talk of devolution usually revolves around the idea of saving work for IDRC staff. As at least one program person pointed out, this may not be entirely true and would need to be carefully validated as there is a lot of work to managing IDRC input into an externally managed program. However, irrespective of who is responsible for such a grant-making project, there are many steps involved and seeking an institution with the required program and administrative skills would take considerable time. No doubt significant financial incentives would also be required to encourage another organization to assume this management role.

Some potential **positive benefits of devolution** include the opportunity to build the financial and administrative capacity of a developing country partner and to establish a strong working relationship between IDRC and the managing

institution. Transfer of administration to a Third World partner could also shift control of the research agenda to the developing country institution.

**Negative consequences of devolution** include loss of visibility and the IDRC and RoKS “branding” that is currently attached to the program. Perhaps more important from a program perspective would be the loss of front-line contact with individuals and organizations committed to working on development issues with a direct link to RoKS programming. Some concerns were also raised about loss of financial accountability and control over the choice of themes as IDRC would be less directly involved in these processes. Of particular importance is the potential that may be lost to engage in resource expansion as other donors become interested in collaborating with the awards program.

## **Historical Perspective: Grant-Making Programs within IDRC**

IDRC has used different funding mechanisms since the 1970s to help achieve its program objectives. One innovative form of support has been the commitment of IDRC program funds for grant-making projects. These projects have been managed both by IDRC and by partner institutions.

Grant-making projects have been used for a variety of strategic reasons, among which some of the more important have been to:

- Build individual and institutional research capacity;
- Encourage research on a particular topic or in a thematic area;
- Help define new program directions and respond to changing research priorities; and
- Create synergies by establishing linkages and networks among like-minded individuals and institutions.

Previous IDRC studies have reviewed the Centre's history with this form of project funding and assessed its performance in achieving program objectives. The Office of Planning and Evaluation was responsible for two studies in 1985: *Review of Small Grants Programs in Southeast Asia: Thailand Case Study*; and *A Review of Small Grant Programs Funded by the International Development Research Centre 1970–1984*. In October 1998, an internal study of *Competitive Grants in Programming: Report of an IDRC Task Force* was completed. In 2003, George Tillman undertook a *Review of the Small Grant Mechanism* and Michael Graham wrote *Management and Administration of IDRC-Funded Grant Projects: A Source Book and Guide*.

The 1985 studies found that the main objectives of grant-making projects were building research capacity, encouraging research in a particular field, and disseminating research results. They also noted a steady growth in the use of this funding mechanism by IDRC and a strong response from the target audience to such grant programs. It was concluded that “compared with regular projects, small grant programs have a somewhat higher administrative cost per research dollar, although there is not much difference in terms of administrative cost per researcher funded.” At that time, half of IDRC's small grant projects and more than 80% of the funded projects involved another donor sharing support.

A number of issues affecting program design and administrative efficiency were identified:

- The need to define the roles of program officials;
- The need to make administrative structures simple and efficient;
- The provision of remuneration for important program functions;

- The segregation of junior and senior applicants;
- The need to ensure that all types of institutions and individuals have the opportunity to compete for funds;
- The need to promote interactions between grant recipients as a forum for exchanging ideas, sharing interests, and staying current on research developments;
- The benefits of focussing and clearly defining a program's research topic;
- The need to ensure a minimum of institutional administrative capacity before going ahead with the program;
- The need to better define responsibilities for decision-making to Head Office, Regional Office staff, and the program coordinator;
- The need to better control administrative costs;
- Perhaps the need for a more active role in the overall monitoring of these programs by Regional Offices;
- The need to clarify which objective, capacity-building or the production of research results, is being served as each requires that a very different program be constructed;
- The important role of program staff in designing and operating small grants programs;
- The need for the development of a better system for determining the output from Centre activities in this area;
- With regard to building research capacity, the small grants mechanism was found to have a high impact on individual careers and a low impact at the institutional level; and
- Adequate mechanisms for monitoring and supervising recipients were found in less than half of the programs ...a key element in providing adequate guidance to recipients is the involvement of institutions and senior scholars in the countries involved.

The IDRC Task Force, reporting in 1998, arrived at these conclusions:

- Competitive bidding is a standard practice in Northern research funding organizations. It is increasingly used in international development cooperation as a mechanism to involve diverse actors in the implementation of development projects. This approach addresses the need for more transparency in the administration of public funds, in a global context of scarcer public funds and greater public scrutiny of their administration.



- While the efficiency of allocating research funds through peer reviewed competitive processes is generally not questioned, there is disagreement on the value of the approach for research capacity building in the South.
- There are costs involved in the transition from the existing allocation procedure to one involving peer-reviewed allocation of a substantial share of IDRC's funds.
- Promoting increased democratization and transparency in research funds allocation in Latin America should be seen as a capacity building activity in itself, given the development context of the region and the global trends in allocation of funds for which institutions from this part of the world compete. At the same time, IDRC may develop a niche in terms of services it provides, which could allow for new forms of cooperation with other Northern donor agencies, IFIs and Southern governments.

In his report, George Tillman, based on a file review of 22 grant-making projects and interviews with Centre staff, reached several conclusions:

- Grant-making projects are a flexible instrument to express IDRC's mandate in a creative way;
- Most grant-making projects are used to build research networks, develop research capacity, introduce and develop new ideas and methodologies, and augment multidisciplinary research skills and capacity;
- Two general modes of operation exist — projects that invite specific individuals or teams to submit proposals and competitions that accept proposals based on a public call for proposals;
- Most grant-making projects are seen to be advancing a program, particularly introducing new activities or approaches;
- Grant-making projects place considerable emphasis on ensuring that methodologies meet rigorous standards and have the potential to generate reliable knowledge;
- Grant-making projects have a core concern with the material effect or influence of knowledge on practices and policies; and
- These projects are labour intensive and input is compressed into periods of focussed activity.

In the introduction to his source book and guide, Michael Graham noted that IDRC had more than 30 active projects in which grant-making was carried-out by a direct recipient of IDRC funds. In addition, six secretariats and corporate projects used a similar modality. These grant-making projects have been used most often to encourage recipients to:

- Enter an unfamiliar field;

- Explore new program initiatives; or
- Reach out to a new set of organizations or experts.

Both recipient institutions and IDRC have faced challenges in the management of these grant projects. Some of the challenges included:

- Choosing the size and type of grant or contribution to fund;
- Identifying target audiences for the project funds;
- Establishing selection criteria;
- Setting up a selection committee;
- Providing clear unambiguous guidelines to prospective candidates;
- Developing primary screening procedures;
- Establishing conditions and modalities, including the establishment of grant contracts aligned with IDRC's standard terms and conditions;
- Establishing and applying a sound financial control framework (financial reporting from grantee to the administering institution and from the administering institution to IDRC);
- Monitoring the work of grantees and ensuring the quality of the research that is undertaken;
- Aggregating the results in progress reports to IDRC;
- Disseminating research results and facilitating the utilization of these results; and
- Obtaining government clearance for externally funded research projects.

The purpose of the manual was to summarize the experiences of IDRC as well as those of its partners who have been managing grant projects. It was written to:

- Present an inventory of best practices in grant projects;
- Define typical donor expectations in both grant administration and project management;
- Strengthen the skills of managers of research grants and grant-making projects; and
- Provide an opportunity for exchange, learning, and networking among managers of programs that are making grants and contributions to support research activities.

## **RoKS Research Competitions**

To date, three competitions have been held and a fourth is being put into place. A summary of each competition is provided along with observations about key administrative and program issues.

### **2001–2002: Public and Private Sector Support to Research: Changing Roles and Policy Responses**

Support was provided for research on the changing balance between public and private sector funding of research, and its implications for developing country governments and research institutions. The competition was open to researchers throughout the developing world. The call for proposals noted that up to seven grants would be awarded, with a maximum value of CAD 80,000 each. Research proposals were to be for a duration of 12 to 18 months.

The overall objective of the competition was to develop an ongoing knowledge network that could advance understanding of the shifting balance of public- and private-sector support to research for development, and engage in debate on possible policy responses at the institutional, national, and international level. Grantees were expected to continue to interact with each other and with an international advisory group throughout the research process, and a final international workshop was planned to debate research findings and the next steps.

The call for proposals asked that research projects focus on one or both of the following themes:

- Trends in funding, performance, and management of research and development — the emphasis was on examining patterns of research funding and understanding the changing nature of research and development activities in Southern institutions; and
- Policy options to stimulate research and development in and for developing countries — including case-studies of particular policy and institutional experiments, as well as comparative analysis of the effectiveness of policy instruments.

The call for proposals provided many suggestions of research questions that might be addressed under each of these themes.

To be eligible, the researchers had to be affiliated with a developing country institution or international institution that was a recognized legal entity capable of entering into contractual arrangements and assuming legal and financial obligations. All principal researchers and co-researchers had to be citizens of developing countries, although collaborators could be citizens of developed countries. Research teams could include: the principal researcher, who had primary responsibility for the intellectual direction of the research and

who assumed administrative responsibility for the grant; co-researcher(s) who made significant contributions to the intellectual direction of the research and played a significant role in the conduct of the research and could have some responsibility for the financial aspects of the research; and project advisor(s) who played various roles in the research activities, including participating in the intellectual direction.

Proposals were to be submitted on an application form developed by RoKS for the competition. This was a very detailed 22-page document that was designed to capture both the main elements of the research proposal as well as pertinent information about the research team and their experience and qualifications.

The final selection of successful applicants was made “on the basis of excellence.” Decisions about which research proposals to fund were made through a peer-review process. Incoming proposals were reviewed for eligibility by IDRC staff. Eligible proposals were forwarded to a selection committee consisting of IDRC program staff and external assessors for independent review. All eligible applications were reviewed based on the following criteria: quality and feasibility of research proposal (weighting 40%); potential for impact (weighting 30%); and suitability of candidate and research team (weighting 30%).

Applicants were advised that if their proposals reached a second stage of review they might be asked to provide additional documentation to support their applications (country clearance where required, incorporation documents of the associated research institution, banking information) or to clarify aspects of the research proposal. Successful applicants were also advised that they would be expected to attend a 3-day project launch workshop before starting their research work.

The selection committee was anonymous for the duration of the selection process. After the results were announced, the names of the members of the selection committee were made public.

### **Program aspects — successful proposals**

Six proposals were funded (see Appendix 3 for abstracts of the projects).

*Development and Implications of Public–Private Partnership in Fish Genetic Research: The GIFT Experience* (Belen O. Acosta, The World Fish Center).

*Research, Development, and Innovation Activities in Argentina in the 1990s: Changing Roles of the Public and Private Sectors and Policy Issues* (Daniel Chudnovsky, Centro de Investigaciones para la Transformación, CENIT).

*Public–Private Research and Development and Innovativeness: Overview and Impacts* (Juana R. Kuramoto, Group of Analysis for Development, GRADE).

*Partnerships for Agroindustry Research and Development in Costa Rica and El Salvador: Toward a Robust Model of Financing Support to Industry* (Olman

Quiros Madrigal, Facultad de Ciencias Agroalimentarias, Universidad de Costa Rica).

*Research and Development in Universities and Different Institutional Settings in South China: Research for Policy* (Qiu Haixiong, Zhongshan (Sun Yat-sen) University Research Institute for Guangdong Development, ZURIGuD).

*Trends in Research and Development Activities in Tanzania* (Samuel M. Wangwe, Economic and Social Research Foundation, ESRF).

### **Administrative aspects**

#### **Advisory Committee**

An International Advisory Committee of seven members was formed in August 2001 to provide guidance and feedback on the direction of the entire RoKS exploratory program, including developing the terms of reference for the research competition. The majority of members originate or reside in developing countries, and they have diverse expertise and experience.

To develop the conceptual framework for the RoKS competition, Bellanet created an e-discussion forum that was designed to permit exchange among the advisory members, as well as a small group of IDRC staff.

#### **Call for Proposals (CFP)**

The competition was officially launched in January 2002 using the application form. Discussions were held about using Bellanet's Online Proposal Appraisal (OPA) system, but in the end the system was late being translated into the two official languages (French/English) and not used.

The CFP was disseminated in a "blitz" that lasted for 2 weeks. Outlets included various listservs, like-minded partners, the Centre public website, the RoKS website, the SID-CTAP website, and the dissemination undertaken by Advisory Committee members and internal staff.

#### **Coordination and Management**

The RoKS Team (50% RoKS Coordinator, 50% Research Officer, 33% Program Assistant, and 20% Intern) undertook all administration. The team was responsible for receiving and fielding all inquiries (via e-mail, fax, phone, and letter) about the competition, receiving and screening all proposal applications, and sending the screened proposals for review.

A pre-screening checklist was created to determine if the proposals met the application criteria. Each proposal was screened against the application criteria as it was received. The two most common reasons for a proposal not passing the pre-screening criteria were: the section of the application form called institutional consent was not signed; and the topic did not fit within the CFP.

The RoKS Team established a filing system (paper and electronic) to track the status of each proposal.

### ***Proposal review and selection***

The first review stage consisted of screening out the incomplete and ineligible applications. This process brought the number of applications down from 127 to 87. The RoKS team short-listed 35 proposals for review by the RoKS Advisory Committee members and internal staff on the basis of set evaluation criteria.

Each reviewer was given 10–12 proposals within their own area of expertise or geographical focus. To maintain transparency, all researcher names on the application forms and proposals were blacked out and the evaluation forms were given a code with simply the title of the proposal.

The purpose of the review was to evaluate the proposals according to quality, impact, suitability of the research team and feasibility of the research. The review took place over two weeks, and the completed reviews were sent back to the RoKS team for tabulation and ranking.

All applicants whose proposals were not recommended for funding were notified via e-mail by the RoKS team. Applicants whose proposals were recommended for funding were also notified and asked to provide further documentation requested by the Centre's Grants Administration Division to facilitate the drawing up of grant agreements.

### **What was learned**

The competition was a major learning experience for the RoKS team. The amount of effort needed to manage a research competition of this size was greatly underestimated. A RoKS workshop was held in Lima, Peru, in October 2002 to bring RoKS awardees together with available Advisory Committee members and Centre staff to discuss their research methodologies. RoKS staff also used this forum to discuss ways in which the competition could be modified not only to make it more efficient, but more importantly more effective for Southern institutions and researchers. As a result, it was decided to:

- Explore the possibility of using a short concept note, rather than a full proposal form — this was expected to cut down on the review time, as well as the effort expended by both the RoKS team and researchers applying for an award; and
- Consider the theme *Global to Local Innovation for Small States: What is Affecting the Nature of Capacity-Building in these States?* for the next competition.

The first RoKS competition yielded a successful response that suggested a significant demand for this type of program. Applications to the competition originated from Africa, Latin America and the Caribbean, and Southeast Asia.

The research proposals addressed issues ranging from the changing patterns in agricultural research and reform to S&T trends in specific technology and industry sectors.

### ***2002–2003: Strengthening Knowledge Policy for Small States: How can small states participate more effectively in local, regional, and global knowledge partnerships?***

The call for proposals noted that RoKS believed that it was time to examine a number of issues related to strengthening the knowledge policies of small states. The stated reasons for this interest included: knowledge has become a much more interdisciplinary, and distributed activity and includes the physical, engineering, health sciences, social sciences, and humanities; mobility of skills and talent has increased; security issues have become global concerns requiring cooperative knowledge partnerships; technological breakthroughs are outpacing the speed at which institutions can adjust to absorb and reflect this change; decision-making in foreign policy, trade, and investment have become highly technocratic with justifications often based on poorly applied scientific rationale; and the global nature of knowledge has extended to both large and small states through collaboration and new mechanisms of partnerships at the local, regional, and international levels.

The competition was an opportunity to help small states develop long-term policies and strategies to capture emerging opportunities as well as timely and strategic knowledge to avoid pitfalls. To stimulate research in this subject, the competition requested concept notes, rather than full proposals, to address the following questions:

- What specific strategies or approaches have been shown to be successful in the improvement of gaps for knowledge and learning gaps in small states?
- How can regional collaboration, for example, be designed to leverage cooperation in knowledge networks among small states?
- As the policy gaps and learning divides increase the disparities among the small and large states, what mechanisms and policies can alleviate this knowledge chasm?
- What reforms in knowledge institutions are required to ensure that they are seen to be contributing to the economic and social development of small states?
- How can small states participate in emerging issues affecting the health and life sciences revolution, the digital explosion, the technological trade arena, and the reconstruction of their scientific and knowledge infrastructure following conflict and social unrest?
- What are research solutions to these challenges and what specific policy prescriptions can be considered for small states?

Eligibility was based on essentially the same criteria as in the previous competition, although the range of developing countries was restricted to legally constituted developing country institutions and international institutions from the modified RAND list. The composition of the research teams, the number of grants available and their value and duration, were the same as in the first competition.

The selection of successful proposals was altered to a two-stage process. The competition sought to fund policy research designed to encourage change. The call for proposals stated a desire for: multi-institutional or multi-country approaches; new approaches to the strengthening of the knowledge capacities of small states; and applications from qualified women. It was also stated that practical policy impacts and recommendations for change were anticipated and that close attention and weight should be paid to the dissemination and communication of research results.

All incoming concept notes were reviewed for eligibility by IDRC staff. Eligible concept notes were forwarded to the selection committee of IDRC program staff and external assessors for independent review based on these criteria: quality and feasibility of concept note (weighting 40%); potential for impact (weighting 30%); and suitability of candidate and research team (weighting 30%).

After the deadline for submission of concept notes, 2.5 months was allowed to review these submissions and to ask the qualified candidates to submit full proposals.

### **Program aspects — successful proposals**

Six proposals were funded (see Appendix 4 for abstracts of the projects).

*Management of Knowledge System in Natural Resources: Exploring Policy and Institutional Frameworks in Nepal* (R.B. Chhetri, Forest Resources Studies and Action Team, ForestAction, Tribhuvan University).

*Assessment of the Effectiveness of Learning Methods and the Importance of Networking to Bridging the Learning and Knowledge Divide in Small Island Developing States* (Mario Delos Reyes, University of the Philippines, School of Urban and Regional Planning).

*Promoting Excellence in Teaching and Research Through Connectivity to Global Knowledge Networks* (Sujata Gamage, Director, Knowledge Networks Program, LIRNEasia).

*Knowledge Network Participation by Small States Using the Third International Standard for Phytosanitary Measures as a Case Study* (M.T.K. Kairo, CABI Caribbean and Latin America Regional Centre).

*Determining Strategies and Approaches for Reducing Gaps in Health Knowledge and Learning in Tanzania* (Leonard E.G. Mboera, National Institute for Medical Research, NIMR).



*Closing the Knowledge Gap in a Small Developing Economy: A Study of the Vietnamese Automotive Industrial Sector* (Tran Ngoc Ca, National Institute for Science and Technology Policy and Strategy Studies, NISTPASS).

### **Administrative aspects**

All administrative aspects followed the pattern that was established for the first competition. The significant change was the introduction of a two-stage application and review process.

#### ***Call for proposals and proposal review***

For the second competition, a two-stage process was implemented. Phase I required the applicants to submit an 8-page concept-note application. Those selected through this pre-screening process were asked to complete a more detailed application form and to submit full proposal. In total, 65 proposals were submitted to the first stage, and after peer review, 14 were asked to submit full proposals. Six awardees were selected from the final 14 proposals.

#### ***Consultation***

As a follow-up to the first two competitions, a workshop was held to bring together the awardees from the first and second competitions as well as the advisory group to exchange the outputs from their research, discuss future collaboration, and consider appropriate next steps.

#### ***2003–2004: Understanding the Social and Public Policy Dimensions of Transformative Technologies in the South***

RoKS conducted the third competition in partnership with the Rockefeller Foundation. The competition was designed to support research on the social equity and public policy challenges that transformative technologies present to developing countries. The focus was on how social equity and the human condition was being affected by emerging technologies, as well as on what mechanisms and learning processes are in place (or have been developed) to assist governments and public stakeholder groups engaged in the decision-making processes associated with these new technologies.

The competition was once again open to researchers and institutions based in the developing world, and the grants had a maximum value of CAD 80,000. Because of the abundance of analysis of ICT impacts, a premium was given to proposals that addressed new technologies in areas other than ICTs for development.

This competition also used a two-step review process that was initiated with the submission of a concept note. Researchers whose concept notes were deemed to be qualified after the initial peer review process were asked to submit full proposals.

The goal of the competition was to help those in policy and governance systems in the South to keep pace with new knowledge advances and breakthroughs to meet their societal goals of poverty reduction, economic growth, sustainable development, and environmental stewardship. The underlying objective was to help researchers, policymakers, and other stakeholders such as nongovernmental organizations, learn from social experiments and past technologies adapted or invented in their environment to help their current and future systems confront the new and rapid paced emergence of these transformative technologies.

### **Program aspects — successful proposals**

The call for proposals reflected the results of an electronic discussion forum held in October 2003 that involved the RoKS international advisory committee and invited internal Centre staff. The purpose of the e-discussion was to debate issues surrounding the theme: “Challenges of Emerging Technologies in the South,” and in particular to fine-tune the first draft of the call for proposals.

The theme offered a new dimension from the previous two years because the topic of transformative technologies helped the Centre Task Force on Biotechnology and other programming units consider the research environment for future programming strategies. However, the focus of the competition was not on the technology, but rather social equity and public policy aspects of transformative technologies and developing countries. It was also unique in that it was co-funded by the Rockefeller Foundation. This expansion of funding resources allowed the competition to expand to nine awardees.

### **Program aspects — successful proposals**

Nine proposals were funded (see Appendix 5 for abstracts of the projects).

*Towards a Systemic Approach to the Evolution of Biotechnology Policy in Ghana* (Joseph Gogo, S&T Policy Research Institute).

*Understanding the Social and Public Policy Dimensions of Transformative Agricultural Biotechnology in Uganda* (James Katorobo, Centre for Basic Research).

*Regional Food Security Challenge: Informing Public on the Role of Agricultural Biotechnology in Poverty Alleviation in Kenya and Uganda* (James K. Nyoro, Tegemeo Institute of Agricultural Policy and Development).

*Social and Equity Implications and Public Policy Dimensions of Innovative Technologies: The Philippine Experience* (Linda Penalba, UPLB Foundation Inc.).

*Understanding the Larger Political Economy of Decision Making in AgBiotech in India and Making Suggestions for Introducing Social Equity in Framing Public Policy in this Field* (Suman Sahai, Gene Campaign).

*Understanding Policy Processes in Biotechnology and Biosafety Measures in Thailand and China* (Bernadette Resurreccion and Edsel Sajor, Asian Institute of Technology).

*Converging Technologies: What is Being Done and What Should Be Done About Them in the Andean Countries?* (Carlos Aguirre, Catholic University of Boliva).

*Understanding the Social and Public Policy Dimensions of Transformative Technologies in the South: The GM Crops case in Brazil* (Luisa Massarani, Museu da Vida/Casa de Oswaldo Cruz/Fundacao Oswaldo Cruz).

*The Nature and Impact of North-South Partnerships in Biotechnology in the Agricultural and Biopharma* (Lea Velho, Universidade Estadual de Campinas).

### **Administrative aspects**

As was the case with the first two competitions, this third was managed directly by IDRC, with individual MGCs issued for each specific grant. The qualifications and track record of lead researchers, co-researchers, recipient, and collaborating institutions continued to be a built-in requirement of the selection criteria.

Direct management of the research competition by the RoKS team as in the previous two competitions was labour-intensive, particularly near the deadline for receipt of concept notes. Efforts were made to streamline the grant-making process by working with GAD on application procedures, institutional risk assessments, and country clearance requirements. In addition, most of the review of both concept notes and final proposals was carried out by the RoKS international advisory committee and select internal staff with an expertise in the field.

### **Call for proposals and proposal review**

The selected awardees were notified on 10 September 2004 and asked to formally accept their award. From late September 2004 to mid-February 2005, the RoKS team liaised with each of the recipients to refine and further develop their proposals based on comments received through the evaluation process. The final proposals and budgets for each project were finalized at the end of a workshop in Bellagio, and each team selected their official start date. During the proposal refinement stage, a RoKS member met with each of the Asian teams in October 2004, and Joseph Gogo (Ghana) and Carlos Aguirre (Bolivia) took advantage of visits to Ottawa to meet with RoKS and to finalize their proposals. Other awardees were contacted via e-mail or phone. Nodes were established among the regional groupings, and each region presented a set of sub-regional questions in Bellagio that were included in their research projects.

### **Consultation**

The purpose of the Bellagio meeting was to bring together members of the RoKS International Advisory committee, RoKS 2003–2004 awardees,

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Rockefeller and IDRC staff, and a small group of experts to discuss each of the research proposals individually in terms of methodology, impact, evaluation, and gender analyses. Specifically, the meeting sought to: compare and contrast each project within the same region, and among differing regions to share research methodologies and ways of doing and knowing; debate the changing nature of global knowledge and innovation systems, and the developmental impacts of research on knowledge systems; discuss issues in biotechnology and emerging technology; and participate in capacity building sessions on research methodologies, evaluation, and outreach.

The workshop was exhausting for the awardees; however, 8 of the 9 proposals were revised. The overall recommendation to the group was to hold a workshop within each of the three regions (i.e., Latin America, Asia, and Sub-Saharan Africa) at the mid-term of the research phase to share results, make necessary improvements, share lessons learned, and to exchange information and preliminary results. It was suggested this would also strengthen the network developed at Bellagio.

Three regional workshops are scheduled to take place 6 months into the research process: a Latin American workshop in Brazil; an Asia workshop in Singapore (ASRO); and a Sub-Saharan Africa workshop in Kenya (ESARO).

After submission of all nine final technical reports, a final workshop is planned to bring together each of the principal researchers, along with members of the RoKS Advisory Committee, RoKS team, and Rockefeller staff to discuss the research findings, recommendations for further research, and next steps in terms of dissemination/outreach to key policymakers. The tentative date for this workshop is November 2006.

## **Findings and Analysis — Awardees**

The awardees who replied to the email questionnaire represented all three competitions. Of the 9 responses, 4 were from 2001–2002, 3 from 2002–2003, and 2 from 2003–2004.

### ***Administrative Aspects***

#### **Promotion and recognition**

In terms of promotion of the awards competition, electronic announcements (email, listserv, and website) were by far the most effective way of reaching these researchers, followed by personal contact. The key factor that attracted attention to the awards was the theme of the competition, followed by its affiliation with IDRC.

#### **Overall administration**

The award holders were asked to rate their satisfaction with several administrative aspects of the awards program. All respondents gave high marks to the administration process during all three competitions. The sole exception was the form used to submit the proposal (see Table 1).

**Table 1.** Average responses of awardees when asked to judge their level of satisfaction with administrative aspects of the RoKS awards program (responses presented in order of overall satisfaction). Respondents were asked to provide a rating on a scale on which 1 represented “not at all satisfied” and 4 represented “extremely satisfied.”

	Average ratings			Avg.
	2001– 2002	2002– 2003	2003– 2004	
Timeliness of receipt of payments	4.0	4.0	4.0	4.0
Approval processes and receipt of contract	3.5	4.0	4.0	3.8
Adequacy and response time to correspondence concerning your proposal	3.3	4.0	3.5	3.6
Application process	3.0	4.0	3.5	3.5
Speed of acknowledgement of application and results of competition	3.0	4.0	3.5	3.5
Form used to submit proposal	2.5	3.3	2.0	2.6

#### **Application process**

Comments about the process suggest that it has become smoother as experience has been gained in running the program. Awardees from the first competition suggested there were delays in the process and questions about how to proceed. Those from the second and third competitions noted that it was a simple and straight-forward process.

### **Form used to submit proposal**

Comments across all competitions suggest the need for further work on the form used for proposal submission. From the first competition, comments included “the form used is reasonable for developing a research proposal, but too detailed on the CV issues of the researchers and on the budget,” “lengthy and tedious,” and “the project description part of the application was good, but the financial part was a little complicated.”

For the “revised” form used in the second competition, the comments related more to the difficulty in navigating within the form and its locked-in format. The one comment received from the third competition noted that it was “difficult to insert, change, adjust, or add information to the form.” In spite of these criticisms, one person from the second session noted “the format was flexible and allowed ample space to include the explanations to the issues to be raised in the research. The format for budgeting and financial reporting was easy to follow.”

The responses can be summed up in two brief quotes “everything was perfect except the form” and “just simplify the form ... if I were alone, the form would have been enough to deter me from participating in the competition.”

### **Speed of acknowledgement of application and results of competition**

There seems to have been improvement in the speed of acknowledgement of applications and results. Input from awardees from the first competition, suggest that acknowledgement of the application was immediate, but that it took longer than expected to announce the results of the competition. From the second and third competitions, the awardees judged that response times were good and “within the expected time.”

### **Adequacy and response time to correspondence concern proposal**

The feedback also suggests improvement in response time from competition to competition. For the first, responses were “taking a bit longer than expected;” however, for the second, the awardees said they were “completely satisfied” and experienced “reasonable time lags in the responses.”

### **Approval process and receipt of contract**

There were no complaints about the “contracting steps”. Comments suggested that the process was “hassle free and smooth” and that “no delays were experienced.”

### **Timeliness of receipt of payments**

Similarly, payments were always processed on time, were in accordance with financial schedules, and were received without the need for reminders.

### **Suggestions for improvements**

The awardees were asked to suggest how the administration of the awards program could be improved. Here again those from the first competition recommended that the form be simpler to use, while noting the improvement made in the second competition to switch to a concept note. They also suggested that the RoKS team be more realistic in terms of the project selection deadlines because it usually takes a long time to evaluate each proposal and that should be acknowledged in the time schedule of the call for proposals.

Awardees from competition two asked that the form be made more user friendly. One person suggested that a single person be clearly identified as the coordinator of the awards program because dealing with different people on the financial and research issues can cause confusion.

Comments from the third competition awardees centred on the need for more communication between past and ongoing projects teams and the usefulness of more “virtual efforts” to pull together groups and themes, for example, by emailing a summary of findings from previous awardees.

### ***Program and Research Aspects***

Table 2 shows the average responses of awardees from each of the three competitions when they were asked to rate their level of satisfaction with several program and research aspects of the RoKS competitions. The theme of each competition was well matched to the research interests of the organizations and to regional or national priorities. There is some discrepancy in the responses with regard to the opportunity to improve research methodology (3.6) and the technical input and feedback received on the proposal (2.9), although this result is skewed by the responses from competition three. The main areas that would seem to need some attention are providing opportunities to interact with other researchers with similar interests and more general networking initiatives. However, as was noted by the IDRC staff, networking opportunities may be provided, but it is common interests that tend to encourage and hold participation. These responses may be more indicative of the need to tighten themes around specific issues of regional importance to provide the “carrot” or “seed” needed to grow a strong network around an issue or research area. Some specific comments were made to support ratings in each category.

### **Range of people and institutions eligible for funding**

There was some divergence of opinion in the responses. One respondent felt that there was too great a difference in the research experience and research focus of the competition; however, another commented that this was one of the successful aspects of the RoKS competition ... “it allowed a large number of institutions to participate.” Two other awardees noted that the focus of the

## ***RoKS Competitive Grants Program***

**Table 2.** Average responses of awardees when asked about their level of satisfaction with program and research aspects of the RoKS awards program (responses presented in order of overall satisfaction). Respondents were asked to provide a rating on a scale on which 1 represented “not at all satisfied” and 4 represented “extremely satisfied.”

	2001– 2002	2002– 2003	2003– 2004	Avg.
Relevance to theme to the research interests of my organization	4.0	4.0	4.0	4.0
Theme of competition	3.5	4.0	4.0	3.8
Relevance of theme to regional or national priorities	3.8	3.7	3.5	3.7
Flexibility to choose research subject and methods	3.3	4.0	3.5	3.6
Opportunity to improve research methodology	3.3	4.0	3.5	3.6
Application of the results of my research to address problems of influence/change policy	3.3	3.3	3.5	3.4
Range of people and institutions eligible for funding	3.5	3.8	2.5	3.3
Technical input and feedback received on the proposal	3.3	4.0	1.5	2.9
Opportunity to interact with other researchers with similar interests	3.8	3.3	1.5	2.9
Ongoing networking opportunities with fellow researchers	3.5	2.7	2.0	2.7

competition on developing country scientists was very positive; however, one of these people also noted that “the ineligibility of those from developed countries hampered more active participation of some experienced resource persons in our project.” (This may be an isolated issue because the CFP does not preclude developed country resource persons.) This should not be an issue in the fourth competition, which makes specific reference to South–North collaboration.

### **Theme of competition**

The awardees were near unanimous in their support for the choice of themes across all three competitions. The themes supported on-going work and allowed expansion of current efforts. They also noted the timeliness of the themes of the competition as they matched current issues and concerns in developing countries. One respondent did note that the theme of the competitions “could be improved very fast by focussing on emerging issues in developing countries or by provoking the development of new ideas to solve old problems in these countries.”



### **Relevance of theme to research interests of organization**

There was very high level of convergence of the themes of the competition with research interests of the organizations. This should be expected as the organizations with the closest interests in the research themes would be most attracted to the competition and also have the best qualified staff to undertake the research. However, the responses do validate that institutional priorities were well matched to the research being undertaken. A number of the responses reflect this fit ... “this is precisely what we do,” “the theme was highly relevant,” and “the theme captured the research interests of both participating organizations.”

### **Relevance of theme to regional or national priorities**

There was a good match of the themes to regional and national priorities — as might be expected with the relatively broad topics that were selected. Responses indicated that the chosen themes were “a priority for our national government,” “highly relevant to regional and national priorities,” and “very relevant to both regional and national priorities.” At the same time, two participants noted that themes were a little too general. One offered this insight: “Different regions of the world have different priorities, but also have common aspects to the same type of problem. The theme should some how be consulted with many scholars, government people, and private sector representatives.”

### **Flexibility to choose research subject and methods**

Most of the responses indicated that although the theme was chosen in advance, “there was enough freedom to design the proposal.” Others noted: “We were able to choose research areas as well as methods ourselves as the RoKS announcement was open to such flexibility,” and “we were given a wide berth in the selection of our research subject and methods used.” One respondent from the first competition noted “somehow we were forced to look at R&D through the lens of the liner model of innovation, which was already dead.”

### **Technical input and feedback received on the proposal**

Responses were somewhat varied. Comments from the first competition suggested that the meetings organized to provide feedback were a good approach because “we did not only read the comments, but had an opportunity to interact.” Also from the first competition was the comment “although the seminars provided feedback about the proposal and the final reports, there was limited technical input from the RoKS team.” Another first competition awardee suggested that “it would have been important to have comments on the proposal when it was accepted for funding.”

Those from the second competition appreciated the “opportunity provided for experienced researchers to provide feedback during the initial consultation.”

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They also noted that the comments received had allowed them to “make practical adjustments to the study” and to “fine tune our proposal.” One awardee from the third competition noted: “not sure how the project is seen, need more feedback.”

### **Opportunity to improve research methods**

This aspect was seen as one of the advantages of IDRC in general and RoKS in particular. All awardees who replied to this question noted the value of having the opportunity to interact with others to improve, refine, or develop their research knowledge.

### **Opportunity to interact with other researchers with similar interests**

Some of the awardees pointed to the benefits of the workshops in providing that opportunity and in “pulling together a group of scientists who otherwise never would have known of their existence.” However, although there was initial interaction, the lack of ongoing interaction was clear in their comments: “there was not much interaction subsequently,” “the interaction was not sustained,” and there was “no mechanism to interact with the same RoKS projects.” It was suggested that “a moderator for an electronic network who could set topics for discussion might have improved communication.”

### **Ongoing networking opportunities with fellow researchers**

The comments support the findings concerning interactions and the views expressed by IDRC staff. Some reported that networking was difficult given the diversity of themes. Others reported that there was email communication for “time to time.” All except one who responded suggested that this was an area that could be improved. The lone exception noted that “It has helped me to meet regional researchers and interact with them on specific areas of interest. This was a new path in my professional career.”

### **Application of the results of my research to address problems or influence/change policy**

From the first competition there are indications the results of the research are being used. For example: “We have been using the outcome of the research in the national debates, and there is a clear sign that it is going to have a lot of impact in the way that R&D is conducted and funded;” and “It helped to guide in a more technical way how the Ministry of Agriculture in El Salvador should promote research on agriculture related problems bringing together public and private institutions. At the same time, some of the research has been affected by changing priorities “the domestic situation in Argentina has changed and the government priorities do not seem to be the same” and some has had a more indirect influence: “not much as a result of this specific research but because of continuous work on the main topic (science, technology and innovation).”

Those involved in the second competition are also positive in assessing the impact on policy: “The policy recommendations emerging out of our RoKS project have been received positively by policymakers and researchers who work in the sectors from which case studies were undertaken;” and “Some of the results will certainly be applicable to addressing problems of influence / change policy; however, lack of participatory development of the proposal resulted in some of the participants feeling somewhat alienated.” One also noted the need for additional efforts beyond the research stage: “we feel that the results have a good chance to influence change/policy but follow-up is required to distil clear policy messages and engage policymakers in various forums including presentation of results at key meetings.” The single comment from the third competition noted that the research team had “direct access to policymaking circles.”

### **How could the program or research aspects be improved?**

The responses to this open-ended question mirrored and consolidated the opinions expressed earlier. To summarize the views: ensure that potential applicants know how often the competition will take place and what topics will be considered; encourage joint projects between two or among several country teams and provide additional funds for coordination activities; include resource persons from developed countries as advisors; encourage participatory development of project proposals; ensure the diffusion of the results of the finished projects (which was considered a critical aspect that had not yet been pursued) to ensure that findings are applied and interesting ideas are followed up; spend at least two years on one theme for maximum impact and to deepen understanding on one theme before moving to the other; and allow researchers to enhance their methodology capabilities. In addition, some suggestions were made about RoKS involvement. It was suggested that the Director become more involved in the progress of each of the projects and share insights with the research teams (particularly with regard to development of the research proposal and the provision of technical guidance as needed). In addition, have staff enhance efforts to share information about other RoKS activities, such as specially commissioned papers or agreements with other institutions.

Finally, it was suggested that the themes of the competitions could be more specific to the need of the region and that more effort be made to create “virtual” efforts to pull the groups and the themes together (e.g., email a list of summary findings from previous awards).

### ***Overall success in achieving program objectives***

The awardees were asked to rate the success of the RoKS research awards in terms of six of the program objectives that were rated by IDRC staff. The results are presented in Table 3.

## ***RoKS Competitive Grants Program***

**Table 3.** Average responses of awardees when asked to judge the success of the RoKS awards program in achieving each of these objectives (responses presented in order of overall satisfaction). Respondents were asked to provide a rating on a scale on which 1 represented “not at all satisfied” and 4 represented “extremely satisfied.”

<b>Program Objective</b>	<b>Average ratings</b>			<b>Avg.</b>
	2001– 2002	2001– 2002	2001– 2002	
Identify new research topics	3.3	4.0	3.5	3.6
Initiate research in emerging or ignored areas	3.5	3.7	3.0	3.4
Produce tangible results and influence policy or action	2.5	3.7	3.5	3.2
Identify new researchers	3.5	3.3	1.5	2.8
Create research capacity in institutions	2.5	4.0	2.0	2.8
Initiate and sustain networks among awardees	3.0	3.0	1.5	2.5

Comments were provided to amplify responses with regard to each program objective.

### **Identify new research topics**

Awardees feel that RoKS has continued the IDRC tradition of funding research in the fields of science, technology, and innovation. The respondents also felt that either the topics were identified well, or that they already were know but that RoKS provided access to funds that were either “limited or completely unavailable” through other sources, particularly for research in “emerging” areas. One awardee questioned the process that had been used to identify the topics and suggested the need for broader consultation in the selection of topics. There was general agreement that the topics addressed priority issues in areas where there had been little research.

### **Identify new researchers**

Opinions were quite varied in this regard. One person suggested that an open competition was not the best method to identify new researchers; while others thought it was an ideal method. It was also suggested here that RoKS could consider commissioning papers if there is a crucial knowledge gap that needs to be addressed. Others noted that the term “new” was ambiguous. They noted that RoKS had provided funds to developing country scientists, but that these were not necessarily “new researchers” and further that although the researchers were not “new” some of the areas tackled were. Finally, one person noted that new or young researchers are not likely to get funding as it would normally go to more senior scientists.

### **Initiate research in emerging or ignored areas**

One person noted that RoKS funding was important because there is little funding for science, technology, and innovation topics. Another stated that: “without the funding provided by RoKS, some of the research areas, including ours, would have found difficulty with funding since these were areas that are emerging.”

### **Initiate and sustain networks among awardees**

One respondent summarized the networking issue in one sentence: “It is very difficult to sustain networks among researchers working in different regions and with different priorities.” Another suggested that “this has not worked well, but this is more from a perspective that the awardees have not been proactive at following the networks. In my view, IDRC has achieved its objective of establishing the networks, the issue is to make them generate positive outcomes.” Others suggested that RoKS had not been very active in promoting networking and that there was the need for more regular meetings. Finally, one respondent noted that “I have learned and gained a lot (knowledge, funding, colleagues, friends, etc.) as a result of participation in the RoKS program.”

### **Create research capacity in institutions**

Influence on research capacity has been more at the individual level. One awardee stated that: “I think the contribution of RoKS in this case is not much, as it will be rare for one institute to have RoKS funding for several years to the extent it impacts on institutional capacity for research. However, it can stimulate and influence institutional research in a certain direction.” Others noted that university students had gained valuable experience, and that the capacity of regional centres had been improved with regard to addressing specific issues. Finally, one awardee noted that there had been “little technical or methodological advice” and thus limited opportunity to build capacity.

### **Produce tangible results and influence policy or action**

Several very valid points were raised in this context from the participants in the first competition. One awardee noted that “influence on policy is beyond the control of the researchers in many cases. What is important is the quality of policy-relevant research.” Others noted that “it depends more on each institution” and that “this is in the long term, but the projects help to gain credibility and can be used as a model when local discussion arises.”

Those in the second competition referred to the efforts they had made to disseminate their findings. For example: “We feel that the results from our research have good prospects of influencing policy and action. We have already seen this at the country levels and anticipate that dissemination of the results through the international plant protection convention should continue to produce positive influence on policy;” “The research results have been disseminated (in the form of reports and policy briefs) to the concerned

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agencies. If the reports could be published in the form of proceedings, many others could also benefit from the results of this research;” and “The summary report of our project discussed and briefly analyzed the results that were based on interviews and recommendations from two participatory workshops. This was widely disseminated. The report discussed what actions, particularly and including those at the policy level, were necessary in order to effect the recommended changes.”

The one respondent who answered this question from the third competition note that the research contributing “directly to making policy and laws in Vietnam.”

### **How could the program aspects of RoKS awards program be improved?**

Several of the same suggestions were made once again. First, spend more time on one theme before moving on to another, especially if radically different from the first, so that RoKS avoids knowing only a little bit about many things and as a result minimizing its impact. Second, seek ways to coordinate government action in each country by ensuring there is coordination with CIDA, especially since it has funds for reform in the public sector. “It would be great if CIDA provided funding for specific actions that complement the policy-oriented research that RoKS supports.” Third, it was suggested that RoKS should have more of an international presence by having the RoKS Director participate in different activities that “should serve as a platform to create alliances with other similar programs.”

Finally, suggestions were made with regard to dissemination and training. One person suggested the need for a “mechanism for follow-up of promising findings to ensure that they are properly disseminated” and the need to provide “opportunities for training, especially when researchers are dealing with new research areas.” Another suggested that “the holding of periodic seminars to provide a forum to share the research findings could have a multiplying effect on this program.” Finally, a third awardee suggested the need to ensure that “awardees should be encouraged to go beyond submission of the final report.”

The last word goes to one awardee who stated: “The RoKS project has played a big role in linking research and policy aspects of science and it should be strongly encouraged to continue to do so.”

## **Findings and Analysis — IDRC Staff**

### **Experience of IDRC Respondents**

IDRC staff who were interviewed had been directly involved in the administration or program aspects of RoKS. Their joint expertise and experience covered concept development, project development and approval, direct involvement in proposal review, project monitoring and evaluation, and overall program management. In addition, staff had expertise in all aspects of IDRC's financial and administrative procedures related to proposal review and approval as well as on-going project monitoring. In short, they were well placed to comment on the progress that has been made by the RoKS awards competition and to suggest areas that might require change and improvement.

### **Expectations**

It is important to understand the expectations that IDRC program staff had for this awards program when it was conceptualized and implemented. During the interviews, several points were stressed. These included the desire to identify promising and younger researchers in some relatively ignored areas of IDRC programming, to raise the visibility of IDRC with regard to its renewed engagement in science and technology policy, to encourage and develop research ideas that could eventually lead to longer-term programming via regular projects (both within RoKS and other program initiatives within IDRC), to initiate the process of building networks of researchers around specific themes, and to use the vehicle of workshops to critique and refine proposals and strengthen the links between research and action. The initial expectation was that this approach could realize these program objectives in a way that was “not too labour intensive.”

Overall, the respondents were equally split on their assessment that “some” or “most” of their expectations had been met. The overall feeling was that the awards program had been worthwhile.

### **Potential Areas for Program Improvement**

Interviewees were asked in retrospect how the program could have been improved. One area that was suggested was the possible desirability of running a competition that was regional based rather than global or was more tightly focussed on a specific theme. This has a couple of potential benefits. First, it would allow competitions to address regional issues that might allow a greater concentration of interest among awardees and facilitate future networking. It might also allow for easier decision-making among proposals. It could also allow past awardees to become involved in topic selection and perhaps participate as project advisors or competition judges. Second, setting up regional competitions might help develop better engagement with some of IDRC's Regional Offices.

One potential issue could be the idea that there was some sort of “entitlement” to approve a specific number of projects in each region. However, this could be addressed by indicating that only those projects considered worthy of support will be considered and that no pre-established number of projects will be funded.

Another aspect that was judged as worthy of improvement was consideration for the publication and dissemination of the results of the projects. One suggestion was for a single “volume” containing the results. This might prove difficult given the disparity in the topics and approaches, and clearly any decisions to create regional competitions and tighten the focus of the themes would enhance the chance of the success of such a publishing venture. There is no reason of course that the reports, even if somewhat different in approach and outputs, could not be captured and disseminated on the RoKS website in either their original or edited forms.

Two specific suggestions were also made concerning the selection process for future competitions. One possibility is to change from a model that invites proposals to one that invites specific researchers to join a research network on a specific theme. A slight variation on this idea was to pre-select awardees (perhaps those with less research experience) and take them through a series of proposal writing workshops to develop ideas and strengthen research methods.

The respondents also noted the need for more human resources to be dedicated to such an internal competition. This included both the need for program staff and clerical and administrative support.

There is a sense among some respondents that the current model provides a “Cadillac” service that is not sustainable in the long-term. Not only is the process very labour-intensive, the global nature of the competition was considered to be so broad that RoKS “was lucky there were not even more applicants.” This may well become a more important consideration as the awards program becomes even better known internationally. The expansion to include Rockefeller in the program, and the attendant increase in exposure, as well as efforts to seek resource expansion opportunities suggests that future programs may well be inundated with applications. It may be necessary to modify the review and approval processes and perhaps narrow the focus of the awards program.

### **Degree of Satisfaction with Specific Aspects**

Table 4 provides a summary of the level of success that program staff feel the RoKS awards program has achieved. Because the sample size is small, care must be taken in extrapolating conclusions; however, some broad trends appear evident.



**Table 4.** Average responses of program staff when asked to judge the success of the RoKS awards program in achieving each of these objectives (responses presented in order of overall satisfaction). Respondents were asked to provide a rating on a scale on which 1 represented “not at all satisfied” and 4 represented “extremely satisfied.”

<b>Program Objective</b>	<b>Average rating</b>
Initiate research in emerging or ignored areas	3.2
Project development workshops	3.2
Identify new researchers	2.8
Targeted delivery of research funds	2.8
Identify new research topics	2.4
Initiate and sustain networks among awardees	2.3
Produce tangible results and influence policy or action	2.3
Create research capacity in institutions	2.0

The ability to stimulate research in emerging or ignored areas and the project development workshops were rated as being most successful. None the respondents provided a rating of less than three to either of these objectives. The program has been less successful in terms of networking among awardees and creating research capacity within institutions. These findings are mirrored in the responses of the awardees themselves. The low rating given to the production of tangible results and to influencing policy or action is understandable given the short duration of the projects, their scope, and the time required to influence policy and action. Once again, this meshes with the input from awardees. They noted the need for greater emphasis on targeted dissemination of results to secure longer-term impact while pointing to some of the successes they have achieved.

Some specific suggestions were made with regard to each of the program objectives.

**Identify new research topics** — Because the choice of themes has been quite general, the actual identification of new research topics has been limited. Nonetheless, RoKS has encouraged IDRC research support in some new areas. More tightly focused themes would direct efforts to a select few topics. Having a broad theme allows proponents to suggest a wide diversity of research ideas and thus expands the potential to identify a range of new topics, but it also increases the difficulty of judging the relative merit if quite divergent proposals and limits the likelihood of networking as the awardees do not necessarily have closely related interests. This may have been unavoidable and useful in the earliest competitions, but it may be worth seeking more clear focus in the themes of future award programs. To help in this task RoKS could build on inputs from previous awardees, the advisory committee, IDRC staff, and external contacts built up during previous competitions.

**Identify new researchers** — There was some confusion concerning the term “new.” The original idea was to determine which researchers were new contacts for IDRC, not necessarily new, that is less experienced, researchers. RoKS has been able to attract researchers who have not had previous experience with IDRC. About half of those who received awards were new to IDRC. If RoKS wants to attract researchers who fill both definitions of new, then the recent move to make funds available to specifically involve junior researchers is a good idea. It may also be worth expanding the idea of the competition so that there is a research component for more experienced researchers and separate “training award” component specifically targeted at more junior scientists.

Given that the awards program was designed to encourage researchers to contact IDRC for the first time, it would have been desirable (although not likely practical given the current staff complement) to try to establish and maintain contact with these people. New people were attracted to IDRC (but most were unsuccessful in the competition). However, those initial expressions of interest were not cultivated to build up a potential “client base” for RoKS.

**Initiate research in emerging or ignored areas** — Program staff felt the program had had success in this area but that the themes were not so much in ignored areas, but rather the choice of themes helped IDRC look at some different areas of research support — to fill gaps in the IDRC research agenda. The awards program was also used to inform programming within the new biotechnology task force and to make a clear statement that IDRC was once more involved in science policy research.

**Targeted delivery of research funds** — The RoKS awards have targeted broad areas of programming and have in some cases lead to the development of longer-term projects with the awardees. If one of the purposes of the awards program is to be an “entry point” for RoKS, how long will this be essential as the program becomes better known within the research communities in which the program wants to be active? One respondent wondered whether this approach was worthwhile if a mechanism is in place to identify topics. Once the topics are identified, the suggestion was that it is then more efficient to ask people to submit proposals for work on specific themes, and thus the proposals (and funds) are more clearly targeted. The idea of an more open competition then would be used only for an exploratory venture. This suggests that such a competition may be most useful early in the life of a program but a less useful mechanism as the program grows and matures.

**Project development workshops** — IDRC staff were positive in their assessment of the workshops. One respondent wondered how much the studies were actually changed as a result of the interactions. The feeling was that the participants valued the opportunity to obtain peer review of their ideas and methods. As well, the opportunity for personal interaction improves on-

going dialogue about project administration. The workshops were designed to facilitate proposal review as well as budget review. The budget review was handled by a RoKS staff member; however, if this mechanism is to be used in future competitions it might be worth directly involving GAD staff in budget review before the workshop and during the workshop to revise the budgets in accordance with any new approaches that are introduced during the programmatic review.

**Initiate and sustain networks among awardees** — This aspect of programming has been less successful than anticipated. Two ideas were expressed to explain this shortcoming. First, there was lack of human resources to dedicate to the networking activities. The efforts of the Research Officer were lauded as being the only reason that any level of networking occurred. As a point of contact, she was able to maintain links with everyone. These efforts appear to have created an effective hub for information, but little networking occurred naturally directly among RoKS awardees. It was also suggested that the lack of real commonality in the projects limited the potential to awardees to network as their specific interests were quite divergent. In the third competition, some subregional questions were added to the research proposals to try to expand the possibilities for networking. Awardees also felt that networking efforts were limited. One respondent noted that networking among members of the advisory committee had been very good.

For the fourth competition, efforts are being made to encourage S-S partnerships and N-S links to help encourage networking. This may be an effective approach to achieving program objectives, but the administrative “costs” in terms of country clearances and institutional risk assessments in the current competition format should not be underestimated. These factors pose a major administrative challenge given the fact that many more activities must be undertaken at the same time.

**Create research capacity in institutions** — The general impression among program staff is that this has been spotty or very hard to judge. There may have been some improvement in the administrative side in some smaller institutions. This aspect is difficult to assess over the short term, but is one of the criteria used by the selection committee when assessing proposals.

**Produce tangible results and influence policy or action** — Tangible results have been produced in the form of reports, newsletters, and workshops. However, the success of the broader and more involved process of influencing policy or action is much harder to judge. However, some of the awardees pointed to some specific local successes.

### **Changes required to improve the RoKS awards program**

Several general suggestions were made in terms of ways to improve the RoKS awards program. There is a need for RoKS to engage more program staff to improve the quality of the proposals. In this connection, it was pointed out that in the past it has been easier to obtain additional funding than to secure human resources. In addition, there were changes in personnel within GAD coupled with the extremely high administrative workloads caused by the competition itself as well as by program-related workshops that had to be organized. Future awards programs will need to be clear about what needs to be done well in advance, establish realistic timeframes given GAD experiences with the administration of other projects, and clarify the responsibilities of each of the people involved in the process of project approval and administration.

One other staff-related issue was the need to be able to more actively involve Regional Office staff in the RoKS awards. The level of involvement has varied among offices. Encouraging their involvement depends on having the resources to initiate and sustain contact and interest, and in return, Regional Office involvement should offer opportunities for regional and subject matter specialists to comment on and improve proposals. Some of these issues will no doubt be addressed as the new program area (Innovation, Policy and Science) is launched and resources are allocated to various priorities, including the RoKS competition.

The fact that RoKS now has an institutional “home” was pointed to as important in obtaining more institutional support from some sectors of IDRC because it was no longer viewed as cross-cutting and was now seen as being more substantive. The new status accorded RoKS was also seen as a potential entry point for further resource-expansion as the awards program has already attracted funding from the Rockefeller Foundation, and other funding partners are considered to be interested.

### ***Administrative Issues***

Although program and administrative issues are discussed separately, it is essential that they be thought of in tandem. Program decisions can have profound impacts on the management and administration of projects, just as administrative changes can have dramatic effects on project review and approval.

In terms of GAD staff, the degree of success of the RoKS awards program with regard to specific administrative issues is shown in Table 5. The general feeling among GAD staff was that the main issue with the RoKS awards was the deluge of work coming at the same time. The difficulty of the work or the time to progress from one stage of the review and approval process to another mirrors other projects, but the fact that 6 to 9 projects are being processed simultaneously causes overload.

## RoKS Competitive Grants Program

**Table 5.** Average responses of GAD staff when asked to judge the success of administrative aspects of the RoKS awards program (responses presented in order of overall satisfaction). Respondents were asked to provide a rating on a scale on which 1 represented “not at all satisfied” and 4 represented “extremely satisfied.”

Administrative Aspect	Average rating
Payments	3.0
Application form/process	2.7
Country clearance	2.7
Contracts	2.3
Call for proposals/promotion	N/A
Other (specify)	N/A

Some general observations to start. The contracting (preparation of MGC) was by far the area that was the least successful according to staff. Although there were some issues and delays with regard to country clearance, and some projects that have still not received approval, the frequency of problems was judged to be similar to any other project. The time taken for project approval was overall judged to be normal for a first proposal with a new institution with outstanding commitments of more than \$100,000 that requires a risk assessment and submission of corporate documents. There was also some doubt as to whether the application forms were in fact helping in the processing of the MGC as was part of the original reason for their design.

**Payments** — After the MGCs are signed, the processing of payments is not an issue. The only problems that arise are common to all projects — getting reports on time, linking reports to payments, and sometimes obtaining banking information.

**Application form/process** — The application form is still a work in progress. Some GAD staff would like to see more clarity in the budget requirements and in particular the need to provide sufficient detail in budget notes. The form was changed between the first and second competitions to make it shorter and easier to complete. IDRC program staff thought that this was a good idea as it was based on the submission of a “concept note” rather than a full proposal. Some questions remain ... How is this form different from what IDRC normally expects proposals to include? Has the use of the form made project approval easier and quicker? What information is essential for decision making about the concept note and whether RoKS wants to further explore and expand on the idea? How much detail is required in the budget for the concept note? Is the form making comparisons among proposals easier and more efficient? What do proponents think about the form? Can the format of the form be changed to make it easier to navigate and complete?

The approach has been to develop a form to aid in project review and to try to anticipate the questions/provide the information needed to ensure that all IDRC information requirements are met. This has resulted in a rather complex and long application form. Might it be better to streamline the process to ask only for those elements that are essential for making a program decision about the proposal, and then seek the administrative and financial inputs needed for further processing of the proposal (which could be provided while the program aspects of the project are being refined). RoKS and GAD should continue to collaborate to review the need for, and format of, the application form.

**Country clearance** — Some of the projects that have been selected have addressed somewhat “sensitive” areas of research. As a result, country clearance has had the potential to be more difficult to achieve. However, according to GAD staff, the issues tend to be country specific as some countries have recently become more stringent in their clearance procedures. RoKS is not unique in having delays in these settings.

**Call for proposals/promotion** — GAD staff did not have sufficient experience with these aspects to rate them. One program person noted that the process created lots of work for both IDRC staff and the proponents, while helping to promote RoKS. This person suggested the need to consider tightening the process to a regional competition(s), rather than a global one, to obtain better focus in the process and make the comparison and selection of proposals easier.

**Areas for improvement** — There is a feeling that it is important to clarify where program responsibility ends and GAD takes over. This might help in lessening the workload to a certain extent, but the current nature of the awards program still means that many tasks must be undertaken at the same time. There is also need for consistency in the requirements for budget detail. The differences may be related to differences in interpretation between staff, but may also be related to the risk assessment of each recipient institution. For a new institution, an institutional profile questionnaire (IPQ) must be completed, an audit report is required, and the Regional Controller must do a risk assessment if the grant is more than \$100,000.

The desire of the RoKS awards program to find “new” institutions has a direct bearing on the administrative requirements for project approval. Risk assessment also has implications for third party involvement as risk must be mitigated here too. Ensuring that all administrative requirements are met was estimated to take a minimum of 3 months, and to more likely require 4–6 months. The importance of building this timing into program planning cannot be underestimated. The risk rating that is applied to an institution also affects the reporting requirements and the amount of holdback.

Collaborating institutions may need separate country clearances, and the relationship between the recipient and any collaborating institutions must be spelled out in the MGC. This requires the selection and addition of special clauses to the standard MGC. The desire to expand collaboration among institutions (both S-S and S-N) in the fourth competition will have specific implications for the work and time required to obtain country clearances and prepare MGCs.

### **Findings and Analysis — Devolution of RoKS Awards Program**

Some discussion has taken place with regard to devolving the awards competition to either a Canadian or Third World partner. Program staff were asked to comment on the positive and negative aspects of such a plan. The usual first response is that it would lessen the workload within IDRC and free up human resources to undertake more substantive tasks. However, one person also pointed out that this would have to be carefully assessed as there would still be a lot of work involved in managing the IDRC input to such an externally managed program.

Other potential benefits include the opportunity to build the financial and administrative capacity of a local partner (if non-Canadian) and the establishment of strong bonds between IDRC and the administering institution, whether in Canada or elsewhere. Transfer of administration to a Third World partner would also shift control of the research agenda to the developing country institution.

Some negative consequences of such a move include the loss of visibility and IDRC branding that is attached to the award program. As well, IDRC would lose front-line contact with the individuals and organizations and would not be able to benefit from their expertise and experience. One person also noted that loss of the competition would mean a loss of the external advisory committee. However, such a committee could still be constituted to provide program advice and guidance as needed to the program. There were also some concerns raised about accountability as IDRC would not be able to have the same level of checks and balances on spending of funds. There would also be a loss of some control on program direction as IDRC would be only one vote among other donors, and thus would have less flexibility to modify processes and topics.

## **Appendix 1: Respondents**

The following people were most generous with their time and insights during the conduct of this study.

**Rita Bowry**, Senior Program Officer, Centre Training and Awards, IDRC, Ottawa

**Pascale Bruneau**, Administration Officer, Grant Administration Division (GAD), IDRC, Ottawa

**Tran Ngoc Ca**, The National Institute for Science and Technology Policy and Strategy (NISTPASS), Ministry of Science and Technology (MOST), Vietnam

**Ram B. Chhetri**, Chairperson, ForestAction, Kathmandu, Nepal

**Daniel Chudnovsky**, Director, Centro de Investigaciones para la Transformación (CENTIT), Buenos Aires, Argentina

**Bitrina D. Diyamett**, Tanzania Commission for Science and Technology (COSTECH), Dar es Salaam, Tanzania

**Tim Dottridge**, Director, Special Initiatives Division, IDRC, Ottawa

**Paul Dufour**, Senior Program Specialist RoKS, IDRC, Ottawa

**Margaret Emokor**, Grant Administrator, Grant Administration Division (GAD), IDRC, Ottawa

**Sujata Gamage**, University Grants Commission, Ward Place, Colombo, Sri Lanka

**Jorge Garza**, TechnoServe, Colonia San Francisco, San Salvador, El Salvador

**Brent Herbert-Copley**, Director, Social and Economic Policy, IDRC, Ottawa

**Richard Isnor**, Director, Innovation, Policy and Science, IDRC, Ottawa

**Moses Kairo**, CAB International, Caribbean and Latin America Regional Center, Gordon Street, Curepe, Trinidad and Tobago (Currently: Associate Professor/Director, Center for Biological Control, College of engineering Sciences, Technology and Agriculture, Florida A&M University, Tallahassee, Florida)

**Juana Kuramoto**, Associate Researcher, Group for the Analysis of Development (GRADE), Lima, Peru

**Vyjayanthi (Vyju) Lopez**, CAB International, Caribbean and Latin America Regional Centre, Gordon Street, Curepe, Trinidad and Tobago

**Linda MacWillie**, Executive Assistant, Innovation, Policy and Science, IDRC, Ottawa (formerly, Grant Administrator, GAD)

**Lynne Richer**, Administration Officer, Grant Administration Division (GAD), IDRC, Ottawa

**Jean Woo**, Research Officer, RoKS and Biotechnology, Innovation, Policy and Science, IDRC, Ottawa



## **Appendix 2: Interview Guides and Email Questionnaires**

Separate interview guides were developed for GAD staff and for RoKS and IDRC program staff. In addition, an email questionnaire was developed for RoKS awardees.

### **GAD Staff**

I have been asked to conduct a review of the RoKS Research Awards competition. The purpose of the review is to address specific program and administrative issues and make recommendations for the management of future competitions. I will be gathering information from GAD staff, program staff directly involved with RoKS, recipients of the awards, and some other organizations that run similar awards programs.

The awards program was designed to:

- identify promising researchers;
- increase visibility for IDRC and its partners; and
- identify priorities for longer-term research and action.

The main focus of the evaluation is to identify program and administrative lessons that can be applied to future awards competitions.

Thank you for taking the time to share your ideas with me. Please be assured that all replies will be confidential.

Michael Graham ([mgedit@lincsat.com](mailto:mgedit@lincsat.com))

\*\*\*\*\*

1. How familiar would you say you are with the activities of the RoKS Research Awards competition? Please place an “x” in the () to indicate your reply.

☐ very familiar

☐ familiar

☐ not familiar

2. Can you please describe how you have been involved with, or associated with, the RoKS Research Awards competition?

3. In your opinion, how successful would you say that the administrative aspects of the RoKS research awards have been? Please rate the success on a scale of 1-4 with 1 representing “not at all successful” and 4 “extremely successful” Why did you provide this rating, what evidence do you have?

☐ contracts

Reason for rating, evidence:

☐ payments

Reason for rating, evidence:

☐ application form/process

Reason for rating, evidence:

☐ country clearance

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Reason for rating, evidence:

() call for proposals/promotion

Reason for rating, evidence:

() other aspects (please specify)

Reason for rating, evidence:

4. How did you try to overcome each of these challenges or problems?
5. Were the solutions you tried effective? How might they have been made better?
6. Have there been any changes in IDRC administrative processes that will make future competitions of this type **easier** or more efficient to administer? If so, what are the changes and how do they help?
7. Have there been any changes in IDRC administrative processes that will make future competitions of this type **harder** or more difficult to administer? If so, what are the changes and how have they made things more difficult?
8. Do you have anything else to add?

Thank you.

Michael Graham

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[www.mgedit.com](http://www.mgedit.com)

### ***RoKS and IDRC Program Staff***

I have been asked to conduct a review of the RoKS Research Awards competition. The purpose of the review is to address specific program and administrative issues and make recommendations for the management of future competitions. I will be gathering information from GAD staff, program staff directly involved with RoKS, recipients of the awards, and some other organizations that run similar awards programs.

The awards program was designed to:

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The main focus of the evaluation is to identify program and administrative lessons that can be applied to future awards competitions.

Thank you for taking the time to share your ideas with me. Please be assured that all replies will be confidential.

Michael Graham ([mgedit@lincsat.com](mailto:mgedit@lincsat.com))

\*\*\*\*\*

1. How familiar would you say you are with the activities of the RoKS Research Awards competition? Please place an “x” in the () to indicate your reply.

☐ very familiar

☐ familiar

☐ not familiar

2. Can you please describe how you have been involved with, or associated with, the RoKS Research Awards competition?

3. What were your personal expectations for the RoKS Research Awards when they started?

4. How well would you say that your expectations have been met?

☐ not at all

☐ some have been met

☐ most have been met

☐ all have been met

5. In retrospect, how do you think the awards might have been improved?

### ***Program Issues***

6. In your opinion, how successful would you say that the program aspects of the RoKS research awards have been? Please rate the success on a scale of 1-4 with 1 representing “not at all successful” and 4 “extremely successful” Why did you provide this rating, what evidence do you have?

() identify new research topics

Reason for rating, evidence:

() identify new researchers

Reason for rating, evidence:

() initiate research in emerging or ignored areas

Reason for rating, evidence:

() targeted delivery of research funds

Reason for rating, evidence:

() project development workshops

Reason for rating, evidence:

() initiate and sustain networks among awardees

Reason for rating, evidence:

() create research capacity in institutions

Reason for rating, evidence:

() produce tangible results and influence policy or action

Reason for rating, evidence:

7. How did you try to overcome these challenges or problems?

8. Were the solutions you tried effective? How might they have been made better?

9. Have there been any changes in IDRC program structure or funding mechanisms that will make future competitions of this type **easier** or more efficient to run? If so, what are the changes and how do they help?

10. Have there been any changes in IDRC program structure or funding mechanisms that will make future competitions of this type **harder** or more efficient to run? If so, what are the changes and how do they help?

### **Administrative Issues**

11. In your opinion, how successful would you say that the administrative aspects of the RoKS research awards have been? Please rate the success on a scale of 1-4 with 1 representing “not at all successful” and 4 “extremely successful” Why did you provide this rating, what evidence do you have?

() contracts

Reason for rating, evidence:

() payments

Reason for rating, evidence:

() application form/process

Reason for rating, evidence:

() country clearance

Reason for rating, evidence:

## ***RoKS Competitive Grants Program***

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() call for proposals/promotion

Reason for rating, evidence:

12. How did you try to overcome these challenges or problems?

13. Were the solutions you tried effective? How might they have been made better?

14. Have there been any changes in IDRC administrative processes that will make future competitions of this type **easier** or more efficient to administer? If so, what are the changes and how do they help?

15. Have there been any changes in IDRC administrative processes that will make future competitions of this type **harder** or more difficult to administer? If so, what are the changes and how have they made things more difficult?

### **Future**

16. Some discussions have taken place with regard to devolving the management and administration of the RoKS awards program from IDRC to another partner (either to a Canadian partner or to a series of regional partners in the developing world).

What do you think would be the positive aspects of such a change?

What do you think would be the negative aspects of such a change?

17. How do you think the awards program should be modified or improved in future?

18. What benefits would these changes produce?

19. Do you have anything else to add?

Thank you.

Michael Graham

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## ***RoKS Awardees***

I have been asked to conduct a review of the RoKS Research Awards competition. The purpose of the review is to address specific program and administrative issues and make recommendations for the management of future competitions. I will be gathering information from Grant Administration Division staff within IDRC, program staff directly involved with RoKS, recipients of the awards, and some other organizations that run similar awards programs.

The awards program was designed to:

- identify promising researchers;
- increase visibility for IDRC and its partners; and
- identify priorities for longer-term research and action.

The main focus of the evaluation is to identify program and administrative lessons that can be applied to future awards competitions.

Thank you for taking the time to share your ideas with me. Please be assured that all replies will be confidential.

Michael Graham ([mgedit@lincsat.com](mailto:mgedit@lincsat.com))

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1. When did you receive your award?

- ☐ 2001-2002
- ☐ 2002-2003
- ☐ 2003-2004

2. How did you hear about the competition?

- ☐ flyer or poster
- ☐ electronic announcement (email, listserv, website etc.)
- ☐ personal contact
- ☐ other (please specify)

3. What was it about the competition that attracted your attention?

- ☐ theme of competition
- ☐ affiliation with IDRC
- ☐ availability of funds
- ☐ other (please specify)

### **Administrative Aspects**

4. Overall, how satisfied were you with these administrative aspects of the RoKS awards program? Please rate each aspect on a scale of 1-4, with 1 representing “not at all satisfied” and 4 “extremely satisfied”. For each aspect, please provide a short note to explain your rating.

- ☐ application process

Reason for rating:

## ***RoKS Competitive Grants Program***

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() form used to submit proposal

Reason for rating:

() speed of acknowledgement of application and results of competition

Reason for rating:

() adequacy and response time to correspondence concerning your proposal

Reason for rating:

() approval processes and receipt of contract

Reason for rating:

() timeliness of receipt of payments

Reason for rating:

5. In your opinion, how could the administration of the RoKS award program be improved in future? Why do you say this, and what improvements would result from your suggestion?

### **Program Aspects**

6. Overall, how satisfied were you with these program or research aspects of the RoKS awards program? Please rate each aspect on a scale of 1-4, with 1 representing “not at all satisfied” and 4 “extremely satisfied”. Reason for rating: For each aspect, please provide a short note to explain your rating.

() range of people and institutions eligible for funding

Reason for rating:

() theme of competition

Reason for rating:

() relevance to theme to the research interests of my organization

Reason for rating:

() relevance of theme to regional or national priorities

Reason for rating:

() flexibility to choose research subject and methods

Reason for rating:

() technical input and feedback received on the proposal

Reason for rating:

() opportunity to improve research methodology

Reason for rating:

() opportunity to interact with other researchers with similar interests

Reason for rating:

() ongoing networking opportunities with fellow researchers

Reason for rating:

## ***RoKS Competitive Grants Program***

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() application of the results of my research to address problems of influence/change policy

Reason for rating:

7. In your opinion, how could the program or research aspects of the RoKS award program be improved in future? Why do you say this, and what improvements would result from your suggestion?

8. In your opinion, how successful would you say that the program aspects of the RoKS research awards have been? Please rate the success on a scale of 1-4 with 1 representing “not at all successful” and 4 “extremely successful” Why did you provide this rating, what evidence do you have?

() identify new research topics

Reason for rating:

() identify new researchers

Reason for rating:

() initiate research in emerging or ignored areas

Reason for rating:

() initiate and sustain networks among awardees

Reason for rating:

() create research capacity in institutions

Reason for rating:

() produce tangible results and influence policy or action

Reason for rating:

9. In your opinion, how could the program aspects of the RoKS award program be improved in future? Why do you say this, and what improvements would result from your suggestion?

10. Do you have anything else to add?

Thank you.

Michael Graham

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## **Appendix 3: Abstracts RoKS Competition 2001–2002**

***Development and Implications of Public–Private Partnership in Fish Genetic Research: The GIFT Experience*** (Belen O. Acosta, The World Fish Center). The overall objective of this project was to evaluate evolving public–private partnerships and to determine their effects on the sustainability and achievement of development objectives in genetic research on fish. More specifically, the project sought to: identify the effects of changes in partnerships and funding on R&D in tilapia genetics; assess the delivery of research outputs and their impact on seed producers and farmers; determine how changes in partnerships are affecting funding; synthesize lessons and formulate recommendations on how better linkages can be developed between private and public sector institutions; and develop the Philippine experience as a case study for successful public–private partnerships. The project conducted field and interview surveys and collated secondary information to examine these issues. It also organized stakeholder workshops. The study was conducted in collaboration with the GIFT Foundation International Inc.; the Freshwater Aquaculture Center, Central Luzon State University; and the National Freshwater Fisheries Technology Center, Bureau of Fisheries and Aquatic Resources.

***Research, Development, and Innovation Activities in Argentina in the 1990s: Changing Roles of the Public and Private Sectors and Policy Issues*** (Daniel Chudnovsky, Centro de Investigaciones para la Transformacion, CENIT). The project had three main objectives: to analyze the changes that took place within the structure and performance of Argentina's National System of Innovation (NSI); to evaluate the impacts of the science and technology policies that were adopted during the last decade; and to study the innovation activities undertaken by Argentina's manufacturing firms and to assess the impact of these activities on the performance of the firms. To meet the first two objectives an analytical report was produced in Spanish. To meet the third objective, the project analyzed detailed data from more than 700 firms for the period 1992–2001, reviewed the most recent literature on the subject, and applying modern econometric techniques. As well, data from more than 1200 firms provided complementary information on linkages of cooperation and sources of technology acquisition (1998–2001). The project as a whole was designed so that its results could contribute solid analysis to policy debate.

***Public–Private Research and Development and Innovativeness: Overview and Impacts*** (Juana R. Kuramoto, Group of Analysis for Development, GRADE). The main objectives of this research were to: explore the ways in which knowledge is produced, communicated, and applied to development problems; and investigate the policy and institutional frameworks that govern this process and to determine if there is a bias within the research, development, and innovation system in Peru. The study comprised quantitative and qualitative analyses. To analyze the trends followed by R&D and innovativeness in firms, statistical and econometric analyses were performed using the CONCYTEC database on innovation. To examine the institutional framework that governs innovation and assess the participation of the public and private sectors, this study undertook two case studies: innovation to control the fruit fly in mango agriculture; and innovation in copper hydrometallurgy.

### ***Partnerships for Agroindustry Research and Development in Costa Rica and El Salvador: Toward a Robust Model of Financing Support to Industry***

(Olman Quiros Madrigal, Facultad de Ciencias Agroalimentarias, Universidad de Costa Rica). The research had two principal objectives: diagnose current trends and challenges in funding and public–private partnerships in agroindustrial research and development and monitor their social, environmental, and economic effects, and identify and compare the factors and constraints that shape financing and partnering arrangements for agroindustry research and development, and which can contribute to improved competitiveness in Central America’s agricultural sector. The research was conducted in two phases. During the first phase, data were gathered on the political, historical, and legal framework of the agroindustry in each country; the development of agrichains and product promotion; the export and imports of agricultural and value-added products; the number and type of agroindustrial enterprises and employees; the investments (human and financial) made by private and public organizations in agroindustrial research and development; and the agroindustrial technologies derived from and used in public and private initiatives. The second phase aimed at actively supporting the creation of public–private partnerships for innovation development. This phase included in-depth interviews of public–private sector representatives and roundtable meetings with key actors involved in agroindustrial research and development to consolidate and validate the main findings and to formulate partnerships.

### ***Research and Development in Universities and Different Institutional Settings in South China: Research for Policy***

(Qiu Haixiong, Zhongshan (Sun Yat-sen) University Research Institute for Guangdong Development, ZURIGuD). The general objectives of this research were to answer these questions: How do universities and research institutes spread their technological products to enterprises? What role does the local government play in this process? The specific research objectives were to: investigate how a system of innovation is created, particularly in a university research environment; understand the dynamics of the relationships between research units and the non-research technological users (in different social, economic, and institutional contexts); and promote the creation of a benchmark for excellence in science and technology policy by providing an empirical basis to policymakers. This project investigated the linkages between scientists and non-scientific clients in three institutional contexts in Guangdong Province. Empirical information was collected in Zhongshan University (City of Guangzhou), in a technological research centre based in a textile industrial district, and in a research and development unit in a large motorcycle industrial company. The project investigated the hypothesis that the interaction between knowledge centres and productive sectors takes place within an array of semi-private funding mechanisms and hybrid institutional arrangements.

### ***Trends in Research and Development Activities in Tanzania***

(Samuel M. Wangwe, Economic and Social Research Foundation, ESRF). This study sought to establish trends in research and development funding in terms of source, amount, and institutional arrangements over the past two decades and to provide an assessment of the effectiveness and relevance of research and development programs and projects to their intended beneficiaries. The research had several specific objectives: document yearly sectoral funding to R&D projects over the past two decades; document sectoral sources of research and development funding over the past two decades; determine trends in the balance of funding among different sources; determine the relevance of

research and development programs by sector and source of funding; explain the observed trends and shifts in funding sources; identify and compare the systems of innovation within the three sectors; and indicate the role of policy in influencing funding for research and development with a view to enhancing technological capability and increasing productivity. The research methods adopted in this project were guided by the national systems of innovation approach. Three sectors were selected for detailed analysis: agriculture, health, and industry. Both primary and secondary sources were consulted to identify the main actors in the research and development system, which included research and development institutes as well as firms, farmers, and other users. Funding patterns (i.e., sources and amount), institutional arrangements, and the relevance and effectiveness of research and development were determined using both surveys and case studies. A broad range of sectors, institutions, and beneficiaries were consulted to determine who was doing what, where, and with what means. The data were used in the selection and design of case studies that have provided detailed accounts of select research and development institutions and programs.

## **Appendix 4: Abstracts RoKS Competition 2002–2003**

***Management of Knowledge System in Natural Resources: Exploring Policy and Institutional Frameworks in Nepal*** (R.B. Chhetri, Forest Resources Studies and Action Team, ForestAction, Tribhuvan University). The general objective of this research was to contribute to improving the policy and institutional framework for managing knowledge systems related to sustainable and equitable development. The focus was on natural-resource management in Nepal. The two specific objectives of the research project are to: explore ways in which knowledge is perceived, approached, communicated, and applied; and investigate policy and institutional frameworks at both the strategic and operational levels. Case studies were conducted within the fields of forestry, irrigation, and agriculture. At all levels in these systems, government institutions, NGOs, private sector participants, and local communities were consulted to generate lessons about: strategies for promoting geographically and culturally specific knowledge systems; ways to foster effective partnerships between various knowledge forms and between different levels of development management (community, district, national, and international); and approaches and strategies for promoting knowledge-management incentives within government and non-government institutions.

***Assessment of the Effectiveness of Learning Methods and the Importance of Networking to Bridging the Learning and Knowledge Divide in Small Island Developing States*** (Mario Delos Reyes, University of the Philippines, School of Urban and Regional Planning). The overall objective of the research was to make positive contribution to the enhancement of education and training services in SIDS through participating in knowledge partnerships. The specific project objectives were to: explore the specific learning experiences of the partner institutions and identify efficient methods in these experiences that may be adapted and transferred to SIDS; devise and validate learning methods that could be adapted by SIDS; and explore how cross-regional networking contributes to knowledge partnerships through continuous learning from exchange of best practices and lessons in SIDS. The project used a number of methods to achieve its objectives: an assessment of existing learning methodologies using questionnaire surveys and key informant interviews; comparative analysis (including gender analysis); the development, testing, and modification of a toolkit; networking to encourage partnerships; and evaluation.

***Promoting Excellence in Teaching and Research Through Connectivity to Global Knowledge Networks*** (Sujata Gamage, Director, Knowledge Networks Program, LIRNEasia). This project sought to address two main questions: What does connectivity to global knowledge networks mean for university teaching and research in a small developing country, what should be the extent of connectivity, and how can the quality and extent of connectivity be assessed? How can a small developing country promote global connectivity in university teaching and research? The specific research objectives were to: develop a method for assessing faculty quality taking into account their participation in global knowledge networks; benchmark the desired extent of participation for at least one discipline in the Life Sciences, Mathematics and Physical Sciences, Engineering, and Social Sciences, Arts, and Humanities by using peer institutions in Asia and elsewhere as benchmarks; carry out several pilot projects to promote global connectivity in teaching and research with a focus on enabling access to information sources, including full-text delivery and online access to Internet

sources, and establishing links between local researchers and centres of excellence abroad; submit policy proposals to the University Grants Commission, the National Science Foundation, and other authorities to encourage administrative and financial procedures that promote global connectivity; and summarize the findings in a report on assessing, promoting, and rewarding global connectivity in university teaching and research. This project was implemented through the Research Promotion Center at the University Grants Commission of Sri Lanka, with the support of the National Science Foundation of Sri Lanka and the American Center in Colombo.

***Knowledge Network Participation by Small States Using the Third International Standard for Phytosanitary Measures as a Case Study*** (M.T.K. Kairo, CABI Caribbean and Latin America Regional Centre). The study covered three areas: the standard-setting process; implementation; and ways to improve knowledge and participation by small states. The general research objectives aimed to: assess the level of participation in the knowledge network associated with ISPM3 during the standard-setting and implementation processes; and determine how both knowledge and participation can be improved. The specific research objectives were to: determine the level and nature of participation by countries in the standard-setting process; determine the process and outcome of implementation of ISPM3; and identify ways in which knowledge gaps can be reduced and participation in relevant knowledge networks be promoted at the national, regional, and international levels. The research combined semi-structured interviews, an analysis of relevant documentation, a review of policy, legislation, and regulations, an evaluation of national capacity, and participatory appraisal through a virtual workshop. The countries involved in the research were: Dominican Republic, Jamaica, Trinidad and Tobago, Barbados, Kenya, Uganda, Tanzania, Zambia, and the small island states of St. Lucia and Antigua and Barbuda.

***Determining Strategies and Approaches for Reducing Gaps in Health Knowledge and Learning in Tanzania*** (Leonard E.G. Mboera, National Institute for Medical Research, NIMR). The general objective of this research was to explore, identify, and design strategies for improving knowledge and information sharing among health stakeholders within all levels of the health system in Tanzania. The specific objectives were to: explore enabling and constraining factors in knowledge and information sharing among stakeholders; design strategies for filling existing gaps in knowledge and information sharing at all levels (national to community); facilitate information flow and exchange between the national and district and community levels; and create an improved interface between communities and health providers. The research used a combination of in-depth interviews, focus group discussions, and documentary reviews. Interviews were conducted with health-care workers, heads of households, and key informants from both the health sector and government. Focus groups were designed to investigate the relationship between the community and health-care providers. An approximately equal number of women and men heads of households was involved in the in-depth interviews. Separate discussion groups were organized for community leaders, traditional healers, and community members. The documentary review provided information on existing knowledge, information sharing mechanisms, and the quality of qualitative and quantitative information that was available.

Closing the Knowledge Gap in a Small Developing Economy: A Study of the Vietnamese Automotive Industrial Sector (Tran Ngoc Ca, National Institute for Science

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and Technology Policy and Strategy Studies, NISTPASS). The project addressed two main research questions: Can Vietnamese firms gain knowledge and close the knowledge gap by collaborating with multinational actors (e.g., sellers, providers, and suppliers) in their networks; and What is the intellectual property rights (IPR) barrier, among other things, that Vietnamese firms face in this process, and how can they effectively deal with this issue? During the research, the following hypotheses were examined: weak learning readiness is the main constraint facing Vietnamese firms as they seek to network with foreign firms, upgrade their technological capability, and improve their learning ladder; IPR are hindering learning and innovation efforts by small- and medium-size enterprises (SME) in Vietnam, and these enterprises are not receiving sufficient support from the government in terms of a suitable knowledge policy and incentive system; and the macro policy environment does not encourage multinational and foreign actors (suppliers, providers, buyers) to encourage learning by Vietnamese SME. The specific research objectives were to: clarify issues related to learning and innovation in Vietnamese industries and the impact of IPRs; recommend ways to improve the knowledge policy environment in Vietnam; and contribute empirical experiences related to learning and innovation in a small developing economy. The research was conducted through five work packages: a survey of the literature on policy for learning, innovation, and knowledge accumulation of some neighboring countries — with a focus on IPR issues in the context of developing countries. This work is being conducted in collaboration with the Centre for Innovation Law and Policy of the University of Toronto, Canada; an analysis of how the policy environment influences the learning behaviour of Vietnamese firms and the practices of MNCs in working with Vietnamese partners — involved a review of legal and policy documents enacted by the Vietnamese government; a study of the indicators and determinants of learning readiness of local firms through a literature review and exploratory interviews; a survey of local firms to determine their approach to learning; and documentation and distribution of project reports.

## **Appendix 5: Abstracts RoKS Competition 2003–2004**

***Towards a Systemic Approach to the Evolution of Biotechnology Policy in Ghana*** (Joseph Gogo, S&T Policy Research Institute). The concept of National Innovation System imposes an obligation on countries to adopt a participatory approach to Science and Technology policy development. This research proposal aims at facilitating the process of biotechnology policy evolution in Ghana. The specific objectives are to: define the critical stakeholders and analyze their interests and roles; assess Ghana's biotechnological trajectory; formulate a draft national biotechnology policy for Ghana; and create awareness for biotechnology application and development. The methodology includes a survey of the innovation system, stakeholder workshops, focus group discussions, and the organization of a Consensus Conference. A survey of 200 people engaged in biotechnology activities will gather data on laboratory facilities, available human resources, biosafety, and research programs. The main output of the research project will be a draft national biotechnology policy, which will be submitted for adoption as a national document through the Ministry of Environment and Science. Other outputs such as research publications and policy briefs are also envisaged.

***Understanding the Social and Public Policy Dimensions of Transformative Agricultural Biotechnology in Uganda*** (James Katorobo, Centre for Basic Research). In 2001, Uganda embarked on a national agricultural biotechnology program and innovations. In late 2003, the Government of Uganda approved the import of genetically modified foods with strict instructions that they be used for consumption and not for cultivation. In 2003, a biotechnology laboratory to facilitate the above innovations was established at Kawanda Agricultural Research Institute. This study will examine the agricultural biotechnology-related public policy and social issues. Specifically, the study will: map Uganda's agricultural biotechnology system; analyze the dynamics and dimensions of public policy and legal frameworks for agricultural biotechnology in Uganda; analyze the social dimensions of biotechnology processes; and examine the agricultural biotechnology-poverty alleviation linkages. The methodology will include: a review of relevant literature; community surveys and key informant interviews and discussions; and focus group discussions in selected smallholder communities. Major outputs from this research will include policy briefs and research reports. The project is expected to lead to: adoption of informed agricultural biotechnology policies, effective administrative regulations, and legislative frameworks; rationalization and streamlining of biotechnology institutions, research centres, and laboratories; and awareness of the potential benefits and costs of using biotechnology to achieve national goals.

***Regional Food Security Challenge: Informing Public on the Role of Agricultural Biotechnology in Poverty Alleviation in Kenya and Uganda*** (James K. Nyoro, Tegemeo Institute of Agricultural Policy and Development). Food security is a major challenge facing Kenya and Uganda. The argument for agricultural biotechnology appears, at face value, very simple. Well-harnessed transformative technologies can solve the problems of hunger in the region by increasing yields and overcoming challenges of diseases, pests, and nutrient deficiencies. But what is the likelihood that agricultural biotechnology will respond to the needs of poor farmers in the region? Eastern Africa is endowed with a wide range of natural resources that, if used intensively, can ensure food security. The region has a landmass of about 100 million

sq km most of which is suitable for production of food crops, and more than 60% is suitable for livestock farming. About 80% of its people depend on agriculture for food, income, and employment. The performance of agriculture has a strong influence on food security, economic growth, and stability in the region. In spite of massive resource endowment, the regional food security situation remains unstable. This project seeks to address ways of creating a transparent process for building public awareness and dialogue among proponents and opponents of biotechnology, i.e., scientists, the biotechnology industry, policy makers, and the public on the potential impacts of biotechnology in eastern Africa.

***Social and Equity Implications and Public Policy Dimensions of Innovative Technologies: The Philippine Experience*** (Linda Penalba, UPLB Foundation Inc.). In the last four decades, four major rice and corn technology packages have been promoted in the Philippines by different sectors to address food security, poverty, and environmental problems. These technology packages basically differ in terms of the type of technology being promoted (i.e., high yielding crop varieties, traditional rice varieties, and genetically modified crops) and the level of government financial, technical, and policy support. This study will: review the programs pursued to promote these innovative technologies, the extent of government support, and policy instruments to facilitate technology diffusion; identify the factors that constrained or facilitated the success of these initiatives; and draw lessons to meet future public policy and governance challenges. Specifically, it will: determine the socio-economic condition of farmers who were able to access the particular technology, and the kind of government assistance they received; compare the role of various groups in technology promotion and analyze the effectiveness of the policy instruments used to encourage technology adoption; study the social relations and institutional arrangements that evolved in connection with technology promotion and adoption; and draw lessons from these experiences and recommend measures to ensure the equitable access, appropriateness of policies, and policy instruments and sustainability of benefits from these technologies. This study shall be conducted using primary and secondary data. Results of the study can be used by policymakers to design technology packages that address food security, equity, poverty, and environmental concerns.

***Understanding the Larger Political Economy of Decision Making in AgBiotech in India and Making Suggestions for Introducing Social Equity in Framing Public Policy in this Field*** (Suman Sahai, Gene Campaign). This project will examine the political economy of decision-making in Agbiotech in India and suggest ways to introduce social equity in framing policy. This study seeks to understand the processes by which policy is formulated, the main actors, the involvement of women at different levels of decision-making, any process of stakeholder consultations and whether these influence policy. The role of government departments, scientific and academic institutions, private sector, NGOs, farmers and the political leadership will be studied, including the involvement of women, to assess their relative influence on the public policy discourse of Agbiotechnology. A case study of the Green revolution will help understand the role of various agencies and players, the principal decision-makers, and the nature of stakeholder consultation and its impact on policy. Good and bad practices will be identified and lessons learnt to improve the public policy formulation for Agbiotech. A case study of a recent technology adoption, the World Bank supported NATP (National Agriculture Technology Program) will also be undertaken. This case study will examine the processes of setting the agenda, the



people and institutions involved, any gender specific components, and stakeholder consultations and their impact.

***Understanding Policy Processes in Biotechnology and Biosafety Measures in Thailand and China*** (Bernadette Resurreccion and Edsel Sajor, Asian Institute of Technology). This research will study how actors within a policy network have employed certain “regimes of truth” to frame biotechnology policies and their bio-safety guidelines. By exploring such processes, the research will shed light on how certain types of knowledge and knowledge claims on the benefits and risks of biotechnology shaped policymaking in industrial shrimp farming in Thailand and cultivating a new genetically modified rice strain in southwest China. This research will combine an actor-network approach and policy-as-discourse approach to study the policymaking processes. The aggregate unit of analysis will be a policy network that has been actively involved in framing policy on biotechnology and bio-safety guidelines in both countries. The research is premised on the assumption that the behaviour of actors in a policy network are dynamically shaped by particular normative frameworks, knowledge, intentionality, and stakes. However, these may alter or firm up as they exercise choice, engage in interactive bargaining, negotiations, consensus building, conflicts, and debates. In these interactions, some actors are more powerful and deploy multiple resources thereby excluding other voices and other types of knowledge. Gender sensitivity will cross-cut data collection and analysis. Public hearings will be organized with a cross section of stakeholders to get inputs for an Agbiotech policy that is just and equitable and in the best interests of the primary stakeholders, the farmers. The research results will be widely disseminated.

***Converging Technologies: What is Being Done and What Should Be Done About Them in the Andean Countries?*** (Carlos Aguirre, Catholic University of Boliva). Converging technologies (NBIC) can make an important contribution to the sustainable development of the Andean Community (CAN) provided public policies adequately address opportunities and impacts. These policies should arise from dialogues among policymakers, stakeholders, and citizens. The scientific community is responsible for reaching out to these actors. This project will address these questions: how advanced is the knowledge, understanding, and development of NBIC in CAN; what is being done by the scientific communities to transmit opportunities and impacts, and their inherent ethical considerations, in a transparent and understandable fashion to citizens, stakeholders, and policymakers; how systematized is the feedback system for further advancement and application of their work; and how have they influenced the adoption of adequate public policies? The project will: analyze relevant documents; conduct an informal survey and a foresight exercise; prepare five national papers; identify critical issues; and prepare a draft report to be considered at a “policy review” meeting. During the course of the research a network will be established and a website created. The final report will be presented in each country, and a detailed plan for dissemination put in place. It is expected that the results of the Project will become a reference point for policymaking and a road map for policy dialogues on NBIC.

***Understanding the Social and Public Policy Dimensions of Transformative Technologies in the South: The GM Crops case in Brazil*** (Luisa Massarani, Museu da Vida, Casa de Oswaldo Cruz, Fundacao Oswaldo Cruz). The objective of this project is to investigate the policy implications of the development and application of genetically modified (GM) crops and their impact on small farmers and other key

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stakeholders. This issue has important implications for agriculture, developing nations, and Brazil as a major developing country and agricultural producer. The project will design strategies to develop and improve mechanisms for participation by public and stakeholder groups in technological decision-making to democratize these processes. The research has main objectives; to identify key actors and stakeholder groups, their roles in and expectations of the policy process, and to understand the dynamics of technological policymaking; to map the process related to the development of new biosafety legislation and the views of the key actors; to identify the views of small farmers, a key stakeholder group in GM crop policy; and to develop recommendations for policymakers on the inclusion of stakeholder views in decision-making processes and more effective public participation.

***The Nature and Impact of North–South Partnerships in Biotechnology in the Agricultural and Biopharma*** (Lea Velho, Universidade Estadual de Campinas). This project will analyze North–South research partnerships that generate and exploit knowledge for sustainable development, and strengthen local innovation capabilities in developing countries. It will also identify the framework conditions that are necessary, and the policy options that are available, to facilitate mutually beneficial N–S research cooperation. Specific objectives include: mapping N–S research partnerships in four Latin American countries related to biotechnology applied to bioprospecting activities; assessing the impact of changes in the knowledge base on opportunities for learning and innovation through partnerships; understanding the motivations and role of various actors, the types and channels of knowledge flows among partners, and results and impacts in terms of contributions to the countries' system of innovation; assessing impacts on sustainable development; and facilitating international policy dialogue. The information will be stored in a database, from which two partnerships in each country will be selected for detailed case studies. Policy options will be identified in close cooperation with policymakers and academic, business communities, and NGOs, through policy workshops held in Latin America.